



0340



Project No. 519029 November 1994

# Final Report - Volume III of III

# Fire Training Area No. 4 and LARC Area Fort Story, Virginia

Contract No. DACW45-90-D-9002 Delivery Order No. 55

Prepared for: U.S. Army Corps of Engineers Rapid Response Group Omaha, Nebraska



Prepared by: IT Corporation Monroeville, Pennsylvania

RESPONSIVE TO THE NEEDS OF ENVIRONMENTAL MANAGEMENT

**APPENDICES** 

# APPENDIX G SHALLOW AQUIFER ANALYSIS REPORT

# SHALLOW AQUIFER

**ANALYSIS** 

**FOR** 

**BIOREMEDIATION AREA** 

LARC MAINTENANCE SITE

**FORT STORY** 

**VIRGINIA BEACH** 

**VIRGINIA** 

May 12, 1993

Prepared for Solutions Enviornmental Associates, Inc.. 814-B Greenbrier Circle Chesapeake, VA 23320

**GES** 

Geotechnical & Environmental Services, Inc. P.O. Box 354
Mt. Sidney, VA 24467
(703) 248-0610

Project Number E-9317



May 12, 1993

Ms. Dorothy Small Solutions Environmental Associates, Inc. 814-B Greenbrier Circle Chesapeake, Virginia 23320

Reference: Fort Story Bioremediation Project

Dear Ms. Small:

We have completed our analysis of the shallow unconfined aquifer under the referenced site to determine the optimum recovery well system to provide hydraulic isolation during bioremediation operations. To obtain the necessary field data, a total of six (6) wells were installed within the boundary of the site. The location of the wells are shown on the attached Plate 1. Four (4) of the wells labeled MW-1 through MW-4 were installed near the site corners as two (2) inch diameter monitoring wells completed to a depth of approximately fifteen (15) feet. Monitoring well No. 5, installed to a depth of twenty-five (25) feet on the west end of the site, is the four (4) inch diameter pump test well. Approximately thirty (30) feet northwest of MW-5 is MW-6 which is a two (2) inch diameter observation well installed to a depth of fifteen (15) feet. Logs for each of these wells with the exception of MW-6 are attached.

Water levels in the wells twenty-four (24) hours after installation ranged from three (3.0) to six point three five (6.35) feet below ground surface. The elevation of the static water levels across the site indicate the groundwater movement is toward the north as expected. Based on the measured static water level elevations, an average hydraulic gradient of .002 ft/ft was determined between monitoring wells.

Monitoring wells MW-1 through MW-4 were pumped after development for approximately thirty (30) to sixty (60) minutes at a rate of six (6) gpm until a static pumping level (drawdown) was established on each well. The pump was then turned off and the recovery rate measured. Based on this data, an estimate of the hydraulic conductivity was calculated for each well. The rates determined ranged from 190 to 303 gpd/sf or  $9.0 \times 10^{-3} \text{ cm/sec}$  to  $1.4 \times 10^{-2} \text{ cm/sec}$  which is within the range for the fine to medium sand logged in each well boring.

### otechnical & Environmental Services

P. O. Box 354 • Mt. Sidney, VA 24467 • (703) 248-0610

In addition to the short pump testing of MW-1 through MW-4, an eight (8) hour pump test was performed on MW-5. The pump test was performed at a pumping rate of 20 gpm with the four (4) inch submersible pump setting at twenty (20) feet, five (5) feet above the well bottom. Water level changes (drawdowns) were measured in MW-1, MW-4, MW-6 (observation well) and in the pumping well (MW-5) during the eight (8) hour period. The water pumped from the test well (MW-5) was discharged on site east of the pumping well and each monitoring well.

Utilizing the time-drawdown data for each monitoring well, an average hydraulic conductivity value was calculated using a modification of the equilibrium well formula for unconfined aquifers found in "Groundwater and Well" by Johnson Division UOP. The average value calculated was 1,290 gpd/sf or 6.1 x 10<sup>-2</sup> cm/sec. An aquifer transmissivity of 107,384 gpd/ft was determined from the time-drawdown data from MW-6 (nearest well) utilizing aquifer analysis software titled Jacobfit. This software uses Jacob's form of the Theis equation and least squares method of analysis to determine transmissivity and storage coefficient. The time-drawdown curve for MW-6, labeled as OM-1, is attached.

To determine the optimum number of recovery wells and corresponding pumping rates required to provide hydraulic isolation, a computer software capture analysis was performed utilizing the pump test data from the eight (8) hour pump test, the average calculated hydraulic gradient and an estimated effective porosity of .20. Based on this analysis, capture of all groundwater to assure no off site groundwater flow can be accomplished by either two (2) wells pumping at 25 gpm each or three (3) wells pumping at 12.5 gpm each. The site plans (plate 2 and 3) showing the locations of the required recovery wells for each scenario and showing the flow lines during continuous pumping are attached.

Using the two (2) well scenario, the existing MW-5 can be utilized with the addition of one (1) more four (4) inch diameter well to a depth of twenty-five (25) feet. The three (3) well scenario assumes the use of three (3) two (2) inch diameter, five (5) feet long well points installed to a depth of fifteen (15) feet at the locations shown on Plate 3.

Ms. Dorothy Small Fort Story Bioremediation Project/E-9317

The major advantage of the three (3) well scenario is that less groundwater pumping would be required to achieve the same results which may be very important considering all pumped water must stay on site. The location of the three (3) wells for this scenario should also be outside the planned treatment area making installation less complicated.

We are prepared to supervise the installation of the chosen recovery well system the week of May 17. If there are any changes in your work plan or if you have any questions pertaining to our recommendations please let me know.

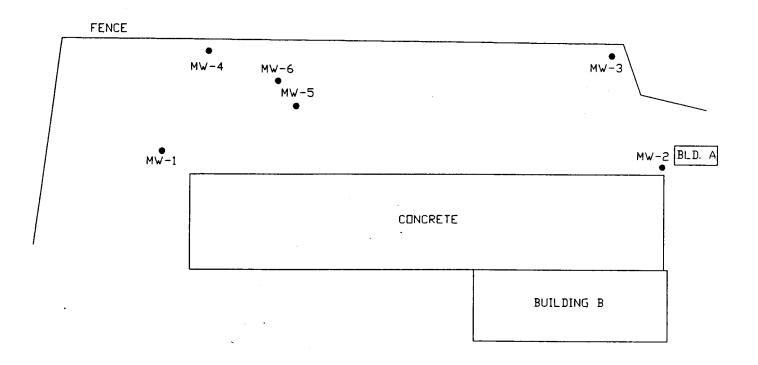
Sincerely,

William J. Barker, P.G. Principal Hydrogeologist

William & Back.

WJB: jlc Attached.

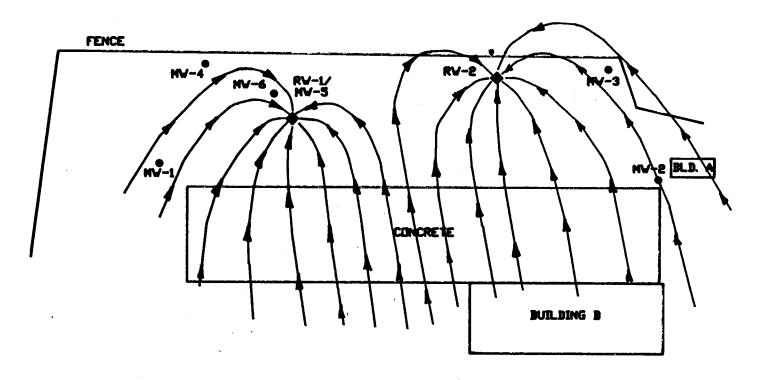




CLIENT:	SOLUTIONS ENVIRONMENTAL ASSOCIATES	
PROJECT:	FORT STORY	J□B#: E-9317
Title:	SITE PLAN	Plate: 1
	GEOTECHNICAL & ENVIRONMENTAL SERVICES,	INC







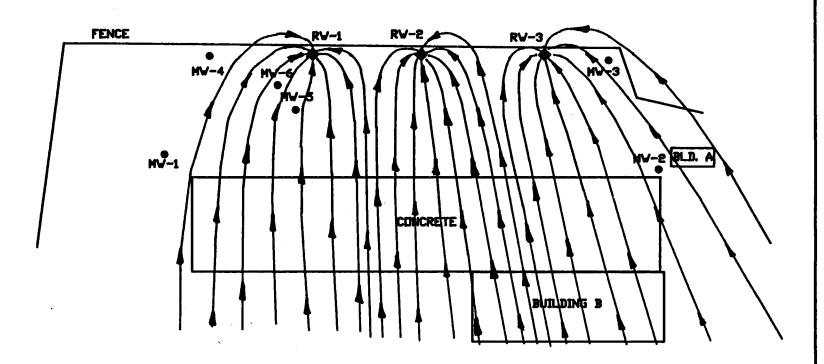
III RV - Location of 4' diameter recovery well

Pathlines & Traveltines (PAT)
Copture Software

CLIENT	SOLUTIONS ENVIRONMENTAL ASSOCIATES		
PROJECT	FORT STORY BIOREMEDIATION SITE	JOB#:	E-9317
Title	TWO WELL RECOVERY SYSTEM	Plate	2
	GEOTECHNICAL & ENVIRONMENTAL SERVICES,	INC	







### RW - Recovery well locations

CLIENT: SOLUTIONS ENVIRONMENTAL ASSOCIATES	
PROJECT: FORT STORY BIOREMEDIATION SITE	JDB#: E-9317
Title: THREE WELL RECOVERY SYSTEM	Plate: 3
GEDTECHNICAL & ENVIRONMENTAL SERVICES,	INC



# PATHLINES AND TRAVELTIMES May 12, 1993

#### THREE WELL OPTION AT 12.5 gpm EACH

### **MODEL PARAMETERS**

MODEL TYPE

	infinite					
DIMEN	ISION OF FLOW x-minimum x-maximum y-minimum y-maximum	FIELD			[m] [m] [m]	0 300 0 250
AQUIF	ER PARAMETER	RS				
	hydraulic condu- effective porosity thickness of aqui- hydraulic gradien direction of natu	y ifer nt			[ m/s ] [ - ] [ m ] [ - ] [ 0-360 ]	.25 8 .002
TIME P	ARAMETERS		•			
	maximum time time increment time between ma	arkers	•		[d] [d] [d]	200 1 10
WELL	DATA					
	limit radius arou number of wells	nd well			[m] [0-30]	5 3
	X [m]	Y [m]		Q [m^3	Ms] /	
	115 150 190	138 138 138		.00079 .00079 .00079		new well new well new well
LANDI	MARKS					
	number of lands				[ 0-5 ] [ 1-10 ]	
	corner points of	polygon #	1			
	X(1) [m] X(2) [m] X(3) [m] X(4) [m]	75 214.3	Y(1) [: Y(2) [: Y(3) [: Y(4) [:	m] m]	100 143 141.8 100	

#### PATHLINES AND TRAVELTIMES

#### May 12, 1993

### TWO WELL OPTION AT 25 gpm EACH

#### **MODEL PARAMETERS**

MODEL TYPE

infinite

x-minimum	[m]	0
x-maximum	[m]	300
y-minimum	[m]	0
y-maximum	[m]	250

#### **AQUIFER PARAMETERS**

hydraulic conductivity	[ m/s ]	.00061
effective porosity	[-]	.25
thickness of aquifer	[m]	8
hydraulic gradient	[-]	.002
direction of natural flow	[ 0-360	] 280

#### TIME PARAMETERS

maximum time	•	[d]	200
time increment		[b]	1
time between markers		[d]	10

#### **WELL DATA**

limit radius around well	[m] 5	
number of wells	[0-30] 2	

X [m]	Y [m]	Q [m^3/s]	
119.4	121.6	.001575	existing MW-6
175	135	.001575	new well

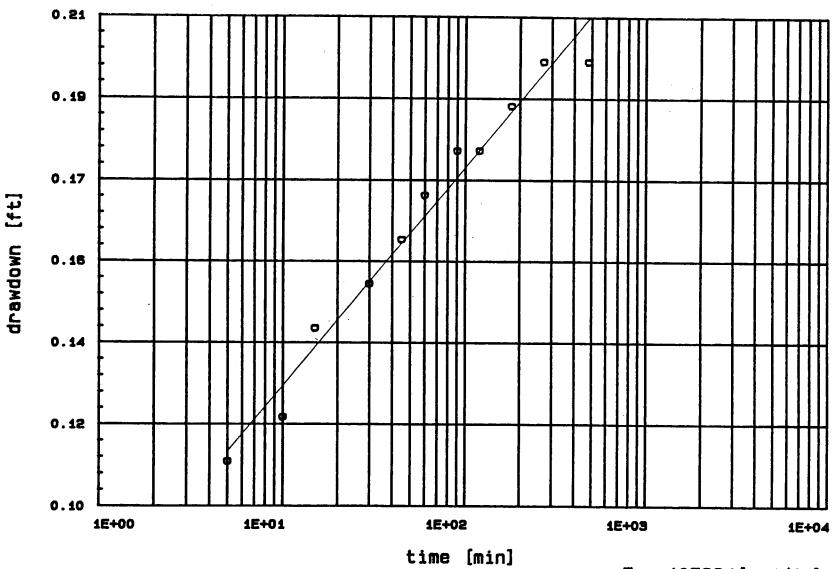
#### LANDMARKS

number of landmarks	[ 0-5 ]	1
corners of landmark #1	[1-10]	4

### corner points of polygon # 1

X(1)[m]	75	Y(1)[m]	·100
X(2)[m]	<b>75</b>	Y(2)[m]	143
X(3)[m]	214.3	Y(3)[m]	141.8
X(4)[m]	227.4	Y(4)[m]	100

# Fort Story Pump Test OW-1



FILE: E93170W1

T = 107384[gpd/ft]

S = .646E-03

	ELL RUCTION	DEPTH (feet)	ELEVATION	BLOWS/FT.	PID (ppm)	SAMPLE NO.	SOIL CLASS	GRAPHIC LOG	Page 1 of 1  MATERIALS  DESCRIPTION
	- Manhole Cover Cement/ Bentonite Seal - Bentonite Pellet Seal	_				1	SP		Tan to buff fine SAND, trace silt and organics, loose, dry to moist
20 00 00 00 00 00 00 00 00 00 00 00 00 0	- 2 in. Schedule 40 PVC Casing	-	94.5 V 92.9	9		2	SP		Buff to orange brown, fine SAND, loose, to medium consistency, moist Saturated below 3.7 FT.
		-5	92.9 92.6	12		3	SP		Buff to light grey, fine— medium SAND, loose to medium consistency
	- 0.01 Slotted PVC Screen	_							
		<b>-</b>			,				
	– 8 In. Borehole	<del>-1</del> 0 -					٠		
	- Morle # 2 Sand Pack	-							
	- Well Cap	- - <del>1</del> 5	81.2				·		BOTTOM OF HOLE AT: 15.4 FT.
		-							Static water level at: 3.7 FT. (92.98)
GES GES	GEOTECHNIC ENVIRONMEN SERVICES, I	ITAL	CL	RFAC	NAME E ELE	So	iution ION		

		⊋	7	Τ.			<i>(</i> 2)	<sub>9</sub>	Page i of i
	₩ELL TRUCTION	OEPTH (feet)	ELEVATION	BLOWS/FT.	. PIO (ppm)	SAMPLE NO.	SOIL CLASS	GRAPHIC LOG	MATERIALS DESCRIPTION
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Manhole Cover Cement/ Bentonite Seal					-	SP		Tan to brown fine-medium SAND, trace organics and debris, moist (FILL)
	— Bentonite Peliet Seal								
75 70 70 70 70 70 70 70 70 70 70 70 70 70	— 2 in. Schedule 40 PVC Casing	-5	96.4	20		3	SP		Block coal mixed with brown fine-medium SAND, medium consistency (FILL)
	— 0.01 Slotted PVC Screen		93.4 ¥ 93.0	21		4	SP		Light grey with black fine sand trace silt and medium SAND, medium consistency, moist-very moist  Saturated below 8.3 FT.
	— 8 in. Borehole	- - -10	89.4				SP		Light grey fine-medium SAND, loose to medium consistency, saturated
	— Morie ≢ 2 Sand Pack								,
	— Well Cap	<del>-1</del> 5	84.1						BOTTOM OF HOLE AT: 15.3 FT.
									Static water level at: 8.35 FT. (83.08)
GES GES	GEOTECHNIC ENVIRONMEN SERVICES, I	NTAL	CI	JRFACI	NAME E ELE	Sol VAT	utlon:	BOI s Enviror 99.43 Fr	eet DRILLING METHOD H. S. Augers

# APPENDIX H SAMPLING AND ANALYTICAL INFORMATION



# ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story 2790 Mosside Boulevard Monroeville, PA 15146 Attn: Tom Mathison February 11, 1993

Job Number: Q301097/099

The Certificate of Analysis is for the following:

Client Project ID:

519029

Date Received by Lab:

01/22/93

Number of Samples:

61/22/9. Five

Sample Type:

Soil/Water

#### 1.0 INTRODUCTION

On January 22, 1993, three soil and two water samples were received at ITAS Pittsburgh, labeled as follows:

Soil:

519029-S001

519029-S003

Water:

519029-W001

519029-S002

TRIP BLANK

#### 2.0 ANALYTICAL RESULTS/METHODOLOGY

Results are presented in the enclosed tables and were determined in accordance with Methods 1010, 3010, 3020, 6010, 7060, 7470, 7740, 7841, referenced in <u>Test Methods for Evaluating Solid Waste</u>, USEPA SW-846, 3rd Ed., 1986; <u>Environmental Protection Agency, Contract Laboratory Program, Statement of Work No. 788</u>, Section IV, Exhibit-D, Part E, July, 1988; Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992, Appendix II.

Reviewed and Approved:

Vlronica Bortot
Veronica Bortot, Project Manager

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

### 2.0 <u>ANALYTICAL RESULTS/METHODOLOGY</u> (Continued)

Results are based on sample concentration and expressed in milligrams per liter or parts per million and micrograms per liter or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit.

#### 3.0 QUALITY CONTROL

QA/QC information can be found immediately following the analytical data.

Date: 02/11/93

Client Project ID: 519029

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

General Chemistry Analysis

Client Sample ID: See below

Sample Date: 01/21/93 Analysis Date: 01/27/93

Client Sample ID Lab Sample ID Ignitability pH

519029-W001 Q30109901  $> 140 \, \text{°F} / > 140 \, \text{°F}$  6.82/6.71

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

### Volatile Organic Compounds

Client Sample ID: 519029-W001 Sample Date: 01/21/93 Lab Sample ID: Q30109901 Analysis Date: 01/28/93

Compound	Concentration µg/L	Compound	Concentration $\mu g/L$
Chloromethane Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone Carbon disulfide 1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloroethene (total) Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate	ND10 ND10 ND10 ND10 ND5 ND100 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5	cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND5 ND5 ND5 ND5 ND5 ND5 ND50 ND50 ND50 N
Bromodichloromethane 1,2-Dichloropropane	ND5 ND5	Xylenes (total)	ND5

### Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	96%
Bromofluorobenzene	95%
1,2-Dichloroethane-d <sub>4</sub>	90%

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

## Volatile Organic Compounds

Client Sample ID: TRIP BLANK

Sample Date: 01/21/93 Lab Sample ID: Q30109902 Analysis Date: 01/28/93

Compound	Concentration µg/L	Compound	Concentration $\mu g/L$
Chloromethane	ND10	cis-1,3-Dichloropropene	ND5
Bromomethane	ND10	Trichloroethene	ND5
Vinyl chloride	ND10	Dibromochloromethane	ND5
Chloroethane	<b>ND</b> 10	1,1,2-Trichloroethane	ND5
Methylene chloride	ND5	Benzene	ND5
Acetone	ND100	trans-1,3-Dichloropropene	ND5
Carbon disulfide	ND5	2-Chloroethylvinylether	ND10
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND50
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND50
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND50	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
1,2-Dichloropropane	ND5	- , ,	

# Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	100%
Bromofluorobenzene	109%
1,2-Dichloroethane-d₄	94%

	WELL TRUCTION	DEPTH (feet)	ELEVATION	BLOWS/FT.	PIO (ppm)	SAMPLE NO.	SOIL CLASS	GRAPHIC LOG	Page I of I MATERIALS DESCRIPTION	
	Manhole Cover Cement/ Bentonite Seal  Bentonite Peliet Seal	_	98.3 98.0	18		1 2	SP GM SP	00	Brown fine SAND with some organics  Stone fill  Tan to buff, fine SAND, trace slit and medium sand, moist	
	— 2 in. Schedule 40 PVC Casing — 0.01 Slotted PVC Screen	-5	92.8 92.3	14		3	SP		Light grey to tank fine to medium SAND, loose to medium consistency	
	— 8 in. Borehole	- - -10							Becomes fine-coarse sand below 10 FT.	
	— Morie # 2 Sand Pack — Well Cap	- - - -15								
		-	81.8						BOTTOM OF HOLE AT: 15.7 FT.  Static water level at: 4.5 FT (42.87)	
GES S	I DED TECHNICAL &   =====									

	WELL TRUCTION	DEPTH (feet)	ELEVATION	BLOWS/FT.	PID (ppm)	SAMPLE NO.	SOIL CLASS	GRAPHIC LOG	Page 1 of 1 MATERIALS DESCRIPTION
	Manhole Cover Cement/ Bentonite Seal Bentonite Pellet Seal  2 In. Schedule 40 PVC Casing	-		5			SP		Tan fine SAND, trace silt, dry to moist, loose
		- 5	93.8 92.5 91.8	26		2	SP		Tan to orange-brown, fine- medium SAND, moist to very moist, medium dense
	- 0.01 Slotted PVC Screen						3		Light grey, fine-medium SAND, little coarse sand, saturated
	— 8 in. Borehole	- -10 -							· ,
	— Morle # 2 Sand Pack	-							
	— Well Cap	- <del>1</del> 5 -	81.8						BOTTOM OF HOLE AT: 15.0 FT. Static water level at: 4.3 FT. (82.57)
GES S	GEOTECHNIC ENVIRONMEN SERVICES, II	ITAL	CL	IRFACE	NAME E ELE	Sol	utions	BOF S Environ 98.87 Fe	pet DRILLING METHOD Augers

	<u> </u>	-				Ī		(0	Page I of I	
	WELL TRUCTION	DEPTH (feet)	ELEVATION	BLOWS/FT.	PID (ppm)	SAMPLE NO.	SOIL CLASS	GRAPHIC LOG	MATERIALS DESCRIPTION	
	Manhole Cover Cement/ Bentonite Seal Bentonite Pellet Seal 4 in. Schedule 40 PVC Casing	-5	<b>¥</b> 92.6	15		2	SP		Light to medium brown, fine SAND, little medium SAND, trace silt, moist-very moist, loose to medium consistency	
	- 0.01 Slotted PVC Screen		89.9				SP		Buff to light grey fine-medium SAND, medium consistency, saturated	
	1/2 in. Borehole	10 - - - 15	85.9				SP		Tan to light grey fine-medium SAND, little coarse SAND and trace fine gravel, loose to medium consistency, saturated	
	— Morie # 2 Sand Pack	- - - -20								
	- Well Cap	- - -25 -	70.8						BOTTOM OF HOLE AT: 25.0 FT. Static water level at: 3.3 FT. (92.80)	
GES	GEOTECHNICAL & LOG OF BORING MW-5PROJ. E-9317  CLIENT NAME Solutions Environmental LOCATION Fort Story, Virginia  SURFACE ELEVATION 95.90 Feet DRILLING METHOD H.S. Augers  TOTAL DEPTH OF HOLE 25.0 Feet GEOLOGIST William J. Barker (4/28/83)									

# FORT STORY BIGREMEDIATION PROJECT ACQUIFER ANALYSIS

DETERMINE HYDRAULIC CONDUCTIVITY (K) FOR UNCONFINED (WATER TABLE) AGRIFER

FORMULA! K = 1055 Q log Re/R, from Groundwater & Wells" pg 105

K = hydroulic Conductivity In gpd/sf

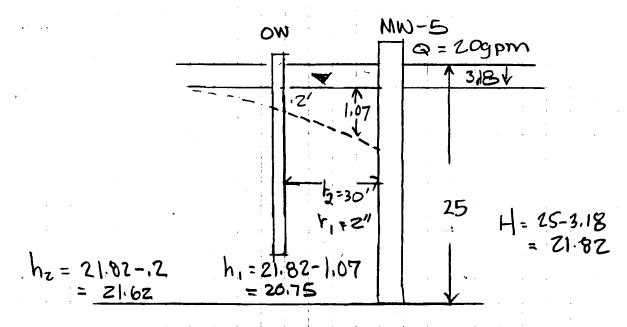
G = pumping rate in gpm

T = radius of well

tz = distance to observation well (ow)

hz = Saturated thickness at ow

h1 = saturated thickness at pumping well



$$K = \frac{1055(20) \log \frac{30}{166}}{(21.62)^2 - (20.75)^2} = \frac{47623}{36.9}$$

K= 1,790 gpd/sF

K= 6.1 × 10-4 M/s or 6.1 × 10-2 cm/sec

# CALCULATE HTDRAULIC CONDUCTIVITY AT MW LOCATIONS

$$K = \frac{1055(6) \log^{133}/.08}{(11.3^2) - (10.6)^2} = \frac{3895.6}{15.33}$$

$$K = \frac{1055(6) \log \frac{33}{108}}{(8.5)^2 - (7.2)^2} = \frac{3895}{20.41}$$

$$|2 = \frac{1055(6) \log \frac{133}{.08}}{(10.5)^2 - (9.87)^2} = \frac{3895}{12.84}$$

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

### Volatile Organic Compounds

Lab Sample ID: METHOD BLANK

Analysis Date: 01/28/93

Compound	Concentration µg/L	Compound	Concentration µg/L
Chloromethane Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone Carbon disulfide 1,1-Dichloroethene 1,2-Dichloroethene (total)	μg/L  ND10  ND10  ND10  ND10  ND5  ND100  ND5  ND5  ND5  ND5  ND5  ND5	cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone	ND5 ND5 ND5 ND5 ND5
Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate Bromodichloromethane 1,2-Dichloropropane	ND5 ND5 ND100 ND5 ND5 ND50 ND5 ND5	Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene Xylenes (total)	ND5 ND5 ND5 ND5 ND5 ND5 ND5

	Surrogate Spike Percent Recovery
Toluene-d <sub>8</sub> Bromofluorobenzene	97% 94%
1,2-Dichloroethane-d <sub>4</sub>	88%

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

### Semivolatile Organic Compounds

Client Sample ID: 519029-W001 Sample Date: 01/21/93 Lab Sample ID: Q30109901 Extraction Date: 01/27/93 Analysis Date: 02/01/93

Compound	Concentration µg/L	Compound	Concentration µg/L
Phenol	ND10	3-Nitroaniline	ND50
bis(2-Chloroethyl)ether	ND10	Acenaphthene	ND10
2-Chlorophenol	ND10	2,4-Dinitrophenol	ND50
1,3-Dichlorobenzene	ND10	4-Nitrophenol	ND50
1,4-Dichlorobenzene	ND10	Dibenzofuran	ND10
Benzyl alcohol	ND20	2,4-Dinitrotoluene	ND10
1,2-Dichlorobenzene	ND10	Diethylphthalate	ND10
2-Methylphenol	ND10	4-Chlorophenyl-phenylether	ND10
bis(2-Chloroisopropyl)ether	ND10	Fluorene	ND10
4-Methylphenol	ND10	4-Nitroaniline	ND50
N-Nitroso-di-n-propylamine	ND10	4,6-Dinitro-2-methylphenol	ND50
Hexachloroethane	ND10	N-Nitrosodiphenylamine	ND10
Nitrobenzene	ND10	4-Bromophenyl-phenylether	ND10
Isophorone	ND10	Hexachlorobenzene	ND10
2-Nitrophenol	ND10	Pentachlorophenol	ND50
2,4-Dimethylphenol	ND10	Phenanthrene	ND10
Benzoic acid	ND50	Anthracene	ND10
bis(2-Chloroethoxy)methane	ND10	Di-n-butylphthalate	ND50
2,4-Dichlorophenol	ND10	Fluoranthene	ND10
1,2,4-Trichlorobenzene	ND10	Pyrene	ND10
Naphthalene	ND10	Butylbenzylphthalate	ND10
4-Chloroaniline	ND20	3,3'-Dichlorobenzidine	ND20
Hexachlorobutadiene	ND10	Benzo(a)anthracene	ND10
4-Chloro-3-methylphenol	ND20	Chrysene	ND10
2-Methylnaphthalene	ND10	bis(2-Ethylhexyl)phthalate	ND50
Hexachlorocyclopentadiene	ND10	Di-n-octylphthalate	ND50
2,4,6-Trichlorophenol	ND10	Benzo(b)fluoranthene	ND10
2,4,5-Trichlorophenol	ND10	Benzo(k)fluoranthene	ND10
2-Chloronaphthalene	ND10	Benzo(a)pyrene	ND10
2-Nitroaniline	ND50	Indeno(1,2,3-cd)pyrene	ND10
Dimethylphthalate	ND10	Dibenzo(a,h)anthracene	ND10
Acenaphthylene	ND10	Benzo(g,h,i)perylene	ND10
2,6-Dinitrotoluene	ND10	G. 1,2	
Surrogate Spike Percent Recovery:			
Nitrobenzene-d	71%	Phenol-d	29%
2-Fluorobiphenyl	75%	2-Fluorophenol	48%
Terphenyl	80%	2,4,6-Tribromophenol	93%
-		•	

Date: 02/11/93

Client Project ID: 519029

#### IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

### Semivolatile Organic Compounds

Lab Sample ID: METHOD BLANK Extraction Date: 01/27/93 Analysis Date: 01/29/93

Compound	Concentration µg/L	Compound	Concentration µg/L
Phenol	ND10	3-Nitroaniline	ND50
bis(2-Chloroethyl)ether	ND10	Acenaphthene	ND10
2-Chlorophenol	ND10	2,4-Dinitrophenol	ND50
1,3-Dichlorobenzene	ND10	4-Nitrophenol	ND50
1,4-Dichlorobenzene	ND10	Dibenzofuran	ND10
Benzyl alcohol	ND20	2,4-Dinitrotoluene	ND10
1,2-Dichlorobenzene	ND10	<b>Diethylphthalate</b>	ND10
2-Methylphenol	ND10	4-Chlorophenyl-phenylether	ND10
bis(2-Chloroisopropyl)ether	ND10	Fluorene	ND10
4-Methylphenol	ND10	4-Nitroaniline	ND50
N-Nitroso-di-n-propylamine	ND10	4,6-Dinitro-2-methylphenol	ND50
Hexachloroethane	ND10	N-Nitrosodiphenylamine	ND10
Nitrobenzene	ND10	4-Bromophenyl-phenylether	ND10
Isophorone	ND10	Hexachlorobenzene	ND10
2-Nitrophenol	ND10	Pentachlorophenol	ND50
2,4-Dimethylphenol	ND10	Phenanthrene	ND10
Benzoic acid	ND50	Anthracene	ND10
bis(2-Chloroethoxy)methane	ND10	Di-n-butylphthalate	ND10
2,4-Dichlorophenol	ND10	Fluoranthene	ND10
1,2,4-Trichlorobenzene	ND10	Pyrene	ND10
Naphthalene	ND10	Butylbenzylphthalate	ND10
4-Chloroaniline	ND20	3,3'-Dichlorobenzidine	ND20
Hexachlorobutadiene	ND10	Benzo(a)anthracene	ND10
4-Chloro-3-methylphenol	ND20	Chrysene	ND10
2-Methylnaphthalene	ND10	bis(2-Ethylhexyl)phthalate	ND10
Hexachlorocyclopentadiene	ND10	Di-n-octylphthalate	ND10
2,4,6-Trichlorophenol	ND10	Benzo(b)fluoranthene	ND10
2,4,5-Trichlorophenol	ND10	Benzo(k)fluoranthene	ND10
2-Chloronaphthalene	ND10	Benzo(a)pyrene	ND10
2-Nitroaniline	ND50	Indeno(1,2,3-cd)pyrene	ND10
Dimethylphthalate	ND10	Dibenzo(a,h)anthracene	ND10
Acenaphthylene	ND10	Benzo(g,h,i)perylene	ND10
2,6-Dinitrotoluene	ND10		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d	58%	Phenol-d	24%
2-Fluorobiphenyl	72%	2-Fluorophenol	36%
Terphenyl	87%	2,4,6-Tribromophenol	71%
• •			

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

### Total Metals Analysis

Client Sample ID: 519029-W001 Sample Date: 01/21/93 Lab Sample ID: Q30109901 Analysis Date: 01/26,27,29/93

01/26,27,29/93 Mercury: 01/26/93

Parameter	Concentration $\mu g/L$	Matrix Spike Percent Recovery
Aluminum	ND100	103%
Antimony	ND60.0	98%
Arsenic	58.7	99%
Barium	50.3	105%
Beryllium	ND5.0	96%
Cadmium	ND5.0	93%
Calcium	7000	-
Chromium	ND10.0	97%
Cobalt	ND20.0	102%
Copper	ND25.0	101%
Iron	1480	140%
Lead	ND50.0	94%/95%
Magnesium	823	<u>-</u>
Manganese	12.3	97%
Mercury	ND0.20	105%
Nickel	ND40.0	99%
Potassium	5560	-
Selenium	ND5.0	103%
Silver	ND10.0	88%
Sodium	4590	-
Thallium	ND10.0	31%
Vanadium	ND20.0	99%
Zinc	ND20.0	106%

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

### Total Metals Analysis

Lab Sample ID: METHOD BLANK Analysis Date: 01/26,27,29/93

Mercury: 01/26/93

Concentration
$\mu\mathrm{g}/\mathrm{L}$
ND100
ND60.0
ND10.0
ND10.0
ND5.0
ND5.0
ND500.0
ND10.0
ND20.0
ND25.0
ND30.0
ND50.0
ND500.0
ND10.0
ND0.20
ND40.0
ND2000
ND5.0
ND10.0
ND500.0
ND10.0
ND20.0
ND20.0

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

# Pesticide/PCB Analysis

Client Sample ID: 519029-W001
Sample Date: 01/21/93
Lab Sample ID: Q30109901
Extraction Date: 01/28/93
Analysis Date: 02/02, 09/93

Compound	Concentration µg/L	
alpha-BHC	ND0.03	
gamma-BHC	ND0.04	
beta-BHC	ND0.06	
Heptachlor	0.03	
delta-BHC	ND0.09	
Aldrin	ND0.04	
Heptachlor epoxide	ND0.83	
Tecnical Chlordane	ND0.14	
Endosulfan I	ND0.14	
4,4'-DDE	ND0.04	
Dieldrin	ND0.02	
Endrin	ND0.06	
4,4'-DDD	ND0.11	
Endosulfan II	ND0.04	
4,4'-DDT	ND0.12	
Endrin aldehyde	ND0.23	
Endosulfan sulfate	ND0.66	
Methoxychlor	ND1.8	
Toxaphene	ND2.4	
Aroclor 1016	ND0.65	
Aroclor 1221	ND0.65	
Aroclor 1232	ND0.65	
Aroclor 1242	ND0.65	
Aroclor 1248	ND0.65	
Aroclor 1254	ND0.65	
Aroclor 1260	ND0.65	
	Surrogate Spike	
	Percent Recovery	
Tetrachlorometaxylene	82%	
Dibutylchlorendate	58%	

IT Corporation/Fort Story Date: 02/11/93

Client Project ID: 519029

#### IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

### Pesticide/PCB Analysis

Lab Sample ID: Method Blank Extraction Date: 01/28/93 Analysis Date: 02/02, 09/93

Compound	Concentration µg/L	
alpha-BHC	ND0.03	
gamma-BHC	ND0.04	
beta-BHC	ND0.06	
Heptachlor	ND0.03	
delta-BHC	ND0.09	
Aldrin	ND0.04	
Heptachlor epoxide	ND0.83	
Tecnical Chlordane	ND0.14	
Endosulfan I	ND0.14	
4,4'-DDE	ND0.04	
Dieldrin	ND0.02	
Endrin	ND0.06	
4,4'-DDD	ND0.11	
Endosulfan II	ND0.04	
4,4'-DDT	ND0.12	
Endrin aldehyde	ND0.23	
Endosulfan sulfate	ND0.66	
Methoxychlor	ND1.8	
Toxaphene	ND2.4	
Aroclor 1016	ND0.65	
Aroclor 1221	ND0.65	
Aroclor 1232	ND0.65	
Aroclor 1242	ND0.65	
Aroclor 1248	ND0.65	
Aroclor 1254	ND0.65	
Aroclor 1260	ND0.65	
	Surrogate Spike	
	Percent Recovery	
Tetrachlorometaxylene	74%	
Dibutylchlorendate	73%	

Date: 02/11/93

Client Project ID: 519029

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

Cyanide Analysis

Client Sample ID: 519029-W001

Sample Date: 01/21/93 Analysis Date: 01/27/93

Client Sample ID Lab Sample ID Concentration

mg/L

519029-W001 Q30109901 ND0.01

METHOD BLANK ND0.01

Date: 02/11/93

Client Project ID: 519029

# IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q301097/099

TCLP Lead Analysis

Client Sample ID: See below

Sample Date: 01/21/93

TCLP Extraction Date: 01/25/93

Analysis Date: 01/27/93

Client Sample <b>ID</b>	Lab Sample ID	Concentration mg/L	Matrix Spike Percent Recovery
519029-S001	Q30109701	0.765	-
519029-S002	Q30109702	0.138	-
519029-S003	Q30109703	2.54	96%
-	TCLP PREPARATION BLANK	ND0.05	-
-	METHOD BLANK	ND0.05	-



# ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

IT CORPORATION 2790 MOSSIDE BLVD. MONROEVILLE, PA 15146-2792 TOM MATHISON Date: 04/23/93

Work Order: B3-04-192

This is the Certificate of Analysis for the following samples:

Client Work ID: FT. STORY 519029

519029

Date Received: 04/20/93 Number of Samples: 4 Sample Type: SOIL

#### I. Introduction

Samples were labeled as follows:

LABORATORY #
B3-04-192-01
B3-04-192-02
B3-04-192-03
B3-04-192-04

Reviewed and Approved:

Jon Bartell

Laboratory Director

Page: 2 of 7

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B3-04-192

### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

519029

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 7

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B3-04-192

SAMPLE ID: 519029S01 SAMPLE DATE: 04/19/93 SAMPLE MATRIX: SOIL

		Note		Reporting		Date M	lethod
Test Name		Ref	<u>Result</u>	Limit	Units	Analyzed R	eference
TPH by GC	(mod EPA 8015)	1	85	2	mg/kg	04/22/93 C	ALIFORNIA

519029

### Referenced notes for these results:

Concentration represents a diesel/JP-5 pattern as well as a pattern of late eluting hydrocarbons.

Page: 4 of 7

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B3-04-192

SAMPLE ID: 519029S02 SAMPLE DATE: 04/19/93 SAMPLE MATRIX: SOIL

		Note		Reporting	Date	Method
Test Name		Ref	Result	Limit Units	<u>Analyzed</u>	Reference
TPH by GC	(mod EPA 8015)	1	1300	35 mg/kg	04/22/93	CALIFORNIA

519029

### Referenced notes for these results:

Concentration represents a diesel/JP-5 pattern.

Page: 5 of 7

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

IT ANALYTICAL SERVICES AUSTIN, TX

AUSTIN, TX (512) 892-6684

Work Order: B3-04-192

SAMPLE ID: 519029S03
SAMPLE DATE: 04/19/93
SAMPLE MATRIX: SOIL

		Note		Reporting		Date	Method
Test Name		Ref	Result	Limit	Units	Analyzed	Reference
TPH by GC	(mod EPA 8015)		ND	2	mg/kg	04/22/93	CALIFORNIA

519029

Page: 6 of 7

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B3-04-192

SAMPLE ID: 519029S04
SAMPLE DATE: 04/19/93
SAMPLE MATRIX: SOIL

		Note		Reporting	Date	Method
Test Name		Ref	<u>Result</u>	Limit Units	Analyzed	Reference
TPH by GC	(mod EPA 8015)	1	66	2 mg/kg	04/22/93	CALIFORNIA

519029

### Referenced notes for these results:

Concentration represents a small diesel/JP-5 pattern as well as a larger pattern of late eluting hydrocarbons.

Page: 7 of 7

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B3-04-192

### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH by GC (mod EPA 8015) TEST CODE TPH\_GC

TPH-Extractable Petroleum

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID Hydrocarbons analysis of extracts run against a diesel standard.

519029



## ANALYSIS RE EST AND CHAIN OF CUSTODY RECORD\*

B30	,4192	
<b>*</b>	Reference Document N Page 1 of <sup>l</sup>	419107
<b>*</b>	Page 1 of '	

Profit Center Project Mar Purchase Orde	nager <sup>4</sup> Tom	254 MATHISON	,	Proje (						THISON Report to	2790 MOSSIDE B MONROEVILLE, PA, D:10 TOM MATHISON IT CORP	
Required Report		RMAL								PER LINE	2796 MOSSIDE BL	15146
Sample <sup>14</sup> Number		mple <sup>15</sup> ion/Type		/Time <sup>16</sup> ected	Contain Type	er <sup>17</sup>	Samp Volur	pie <sup>18</sup> me	Pre- <sup>19</sup> servative	Program	Condition on 21 Receipt	Disposal <sup>22</sup> Record No.
519029501	SOIL	(SAND)	4-19-9	3 0810	AMBER G	LASS	1-25	OML	NONE	TPH BY 418:1+METALS	GOD COND.	
519029502				0820							Temp4'C	
519029803				0830							COTS 4/20/93	* * 2.
519029504		,	V	0840	1			,				
												28 15 1
											Wallet Control	
						,						
Special Instruct	ions: <sup>23</sup>			-	<del></del>							
Possible Hazaro Non-hazard _J	Identificat   Flammable		tant	l Poi	son B		Unki	חחאר	.	Sample Disposal: <sup>25</sup> Return to Client Disp	posał by Lab 🔏 🛚 Archiv	re (mo:
Turnaround Tim	e Required			- 101		QC	Lev	el: 2	7			
Normal XI Rust  1 Relinquished by		7-0		Dat	e: 04-9	<u>                                     </u>			III 1. Rece	Project Specific (specify); ived by <sup>28</sup>	Date	4/20/93
1. Relinquished by (Signature/Affiliation)	ruck Boling	17 Con		Tim	e: //c				(Signature / /	Affiliation)	Time Date:	
2. Relinquished b (Signature/Affiliation)	У			Dat Tim					2. Rece (Signature/	Affiliation)	Time	: 
3. Relinguished b	у			Dat Tim					3. Rece (Signature/	ived by .	Date: Time	



# ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story 2790 Mosside Boulevard Monroeville, PA 15146 Attn: Tom Mathison		May 6, 1993
Job Number: Q304166/167		
The Certificate of Analysis is for the fo	ollowing:	
Client Project ID: Date Received by Lab: Number of Samples: Sample Type:	519029 04/20/93 Four Soil	
1.0 Introduction	· · · · · · · · · · · · · · · · · · ·	
On April 20, 1993, four soil samples w	ere received at ITAS Pittsburgh, lab	eled as follows:
519029S01 519029S02	519029803	519029S04
2.0 Analytical Results/Methodology		
Results are presented in the enclosed and Methods for the Chemical Analysis Methods 3050, 6010, 7060, 7471, 7740, 8 Waste, EPA SW-846, 3rd ed., 1986; En Statement of Work No. 7/88, Section 1	of Water and Waste, EPA, 600 3240, and 8270, referenced in Test Me vironmental Protection Agency, Con	/4-79-020, 1983 revision; ethods for Evaluating Solid
Results of the sample concentrations ar or parts per million and micrograms pe is not detected at or above the indicate	r kilogram or parts per billion. ND d	
Reviewed and Approved:	Carrie L. Smith, Project Manag	ger

American Council of Independent Laboratories International Association of Environmental Testing Laboratories American Association for Laboratory Accreditation

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### 2.0 Analytical Results/Methodology (Continued)

### <u>Volatiles</u>

Sample 519029S02 has surrogates toluene-d<sub>8</sub> and bromofluorobenzene outside the advisory QC limits on the initial analysis; and also, a xylene hit over calibration. A medium level analysis was performed to get xylene within calibration; the surrogates for this analysis were all within the advisory QC limits. Both sets of results have been reported.

### Total Petroleum Hydrocarbons

Sample 519029S04 was analyzed in triplicate for 418.1 due to the variation in the first two analyses.

### 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Volatile Organic Compounds

Client Sample ID: 519029S01 Sample Date: 04/19/93 Lab Sample ID: Q30416701 Analysis Date: 04/30/93

Compound	Concentration $\mu g/Kg$	Compound	Concentration $\mu g/Kg$
Chloromethane Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone	ND10 ND10 ND10 ND10 ND5 ND100	1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene	ND5 ND5 ND5 ND5 ND5 ND5
Carbon disulfide 1,1-Dichloroethene 1,1-Dichloroethane 1,2-Dichloroethene (total) Chloroform 1,2-Dichloroethane 2-Butanone	ND5 ND5 ND5 ND5 ND5 ND5 ND100	trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane	ND5 ND10 ND5 ND50 ND50 ND5 ND5
1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate Bromodichloromethane	ND5 ND5 ND50 ND5	Toluene Chlorobenzene Ethylbenzene Styrene Xylenes (total)	ND5 ND5 ND5 ND5 ND5 ND5

### Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	99%
Bromofluorobenzene	100%
1,2-Dichloroethane-d <sub>4</sub>	86%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q304166/167

### Volatile Organic Compounds

Client Sample ID: 519029S02 Sample Date: 04/19/93 Lab Sample ID: Q30416702 Analysis Date: 05/03/93

Compound	Concentration µg/Kg	Compound	Concentration $\mu g/Kg$
Chloromethane	ND41	1,2-Dichloropropane	ND20
Bromomethane	ND41	cis-1,3-Dichloropropene	ND20
Vinyl chloride	ND41	Trichloroethene	ND20
Chloroethane	ND41	Dibromochloromethane	ND20
Methylene chloride	ND20	1,1,2-Trichloroethane	ND20
Acetone	ND410	Benzene	ND20
Carbon disulfide	ND20	trans-1,3-Dichloropropene	ND20
1,1-Dichloroethene	ND20	2-Chloroethylvinylether	ND41
1,1-Dichloroethane	ND20	Bromoform	ND20
1,2-Dichloroethene (total)	ND20	4-Methyl-2-pentanone	ND200
Chloroform	ND20	2-Hexanone	ND200
1,2-Dichloroethane	ND20	Tetrachloroethene	ND20
2-Butanone	ND410	1,1,2,2-Tetrachloroethane	ND20
1,1,1-Trichloroethane	ND20	Toluene	ND20
Carbon tetrachloride	ND20	Chlorobenzene	ND20
Vinyl acetate	ND200	Ethylbenzene	ND20
Bromodichloromethane	ND20	Styrene	ND20
		Xylenes (total)	2900**

### Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	73%	*
Bromofluorobenzene	384%	*
1,2-Dichloroethane-d <sub>4</sub>	108%	

<sup>\*</sup> Outside QC limits.

<sup>\*\*</sup> Above calibration.

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Volatile Organic Compounds

519029S02 Dilution

Client Sample ID: Sample Date: 04/19/93 Lab Sample ID: Analysis Date: Q30416702 05/04/93

Bromomethane ND1300 cis-1,3-Dichloropropene ND660 Vinyl chloride ND1300 Trichloroethene ND660 Chloroethane ND1300 Dibromochloromethane ND660 Methylene chloride ND660 1,1,2-Trichloroethane ND660 Acetone ND13000 Benzene ND660 Carbon disulfide ND660 trans-1,3-Dichloropropene ND660 1,1-Dichloroethene ND660 2-Chloroethylvinylether ND130 1,1-Dichloroethane ND660 Bromoform ND660 1,2-Dichloroethene (total) ND660 4-Methyl-2-pentanone ND660 Chloroform ND660 2-Hexanone ND660 1,2-Dichloroethane ND660 Tetrachloroethene ND660 1,1,2-Dichloroethane ND660 Tetrachloroethene ND660 1,1,1-Trichloroethane ND660 Toluene ND660	Compound	Concentration $\mu g/Kg$	Compound	Concentration $\mu g/Kg$
Vinyl acetate ND6600 Ethylbenzene ND660	Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone Carbon disulfide 1,1-Dichloroethene 1,2-Dichloroethene (total) Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate	ND1300 ND1300 ND1300 ND660 ND13000 ND660 ND660 ND660 ND660 ND660 ND13000 ND660 ND660 ND660 ND660	cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND1300 ND660 ND6600 ND6600 ND660 ND660 ND660 ND660 ND660

### Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	91%
Bromofluorobenzene	110%
1,2-Dichloroethane-d₄	107%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Volatile Organic Compounds

Client Sample ID: 519029S03 Sample Date: 04/19/93 Lab Sample ID: Q30416703 Analysis Date: 05/03/93

Compound	Concentration $\mu g/Kg$	Compound	Concentration µg/Kg
Chloromethane Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone Carbon disulfide 1,1-Dichloroethene 1,1-Dichloroethane 1,2-Dichloroethene (total) Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate Bromodichloromethane	ND11 ND11 ND11 ND11 ND6 ND110 ND6	1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND11 ND6 ND56 ND56 ND6 ND6 ND6 ND6 ND6 ND6
	ND6		ND6 ND6

### Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	83%
Bromofluorobenzene	89%
1,2-Dichloroethane-d₄	93%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q304166/167

### Volatile Organic Compounds

Client Sample ID: 519029S04 Sample Date: 04/19/93 Lab Sample ID: Q30416704 Analysis Date: 05/03/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone Carbon disulfide 1,1-Dichloroethene 1,1-Dichloroethane 1,2-Dichloroethene (total) Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate Bromodichloromethane	ND11 ND11 ND11 ND11 ND6 ND110 ND6	1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND11 ND6 ND55 ND55 ND6 ND6 ND6 ND6 ND6 ND6
		Xylenes (total)	ND6

Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	100%
Bromofluorobenzene	103%
1,2-Dichloroethane-d <sub>4</sub>	104%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Volatile Organic Compounds

Lab Sample ID: Analysis Date: Method Blank 1

04/30/93

Compound	Concentration $\mu g/Kg$	Compound	Concentration $\mu g/Kg$
Chloromethane Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone Carbon disulfide 1,1-Dichloroethene 1,1-Dichloroethane 1,2-Dichloroethene (total) Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate Bromodichloromethane	ND10 ND10 ND10 ND10 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5	1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND10 ND5 ND50 ND50 ND5 ND5 ND5 ND5 ND5 ND5
		Xylenes (total)	ND5

# Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	101%
Bromofluorobenzene	100%
1,2-Dichloroethane-d₄	114%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Volatile Organic Compounds

Lab Sample ID: Analysis Date: Method Blank 2

05/03/93

Compound	Concentration µg/Kg	Compound	Concentration $\mu g/Kg$
Chloromethane Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone Carbon disulfide 1,1-Dichloroethene 1,1-Dichloroethane 1,2-Dichloroethene (total) Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate Bromodichloromethane	ND10 ND10 ND10 ND10 ND5 ND100 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5 ND5	1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND10 ND5 ND50 ND50 ND5 ND5 ND5 ND5 ND5 ND5
		Xylenes (total)	ND5

# Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	98%
Bromofluorobenzene	96%
1,2-Dichloroethane-d₄	105%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Volatile Organic Compounds

Lab Sample ID: Analysis Date: Method Blank 3

05/04/93

Compound	Concentration $\mu g/Kg$	Compound	Concentration $\mu g/Kg$
Chloromethane Bromomethane Vinyl chloride Chloroethane Methylene chloride Acetone Carbon disulfide 1,1-Dichloroethene 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride Vinyl acetate Bromodichloromethane	ND1200 ND1200 ND1200 ND1200 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620	1,2-Dichloropropane cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene 2-Chloroethylvinylether Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene Styrene	ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND6200 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620 ND620
		Xylenes (total)	111020

# Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	100%
Bromofluorobenzene	98%
1,2-Dichloroethane-d₄	108%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Semivolatile Organic Compounds

Client Sample ID: 519029S01 Sample Date: 04/19/93 Lab Sample ID: Q30416701 Extraction Date: 04/21/93 Analysis Date: 04/26/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND690	3-Nitroaniline	ND3400
bis(2-Chloroethyl)ether	ND690	Acenaphthene	ND690
2-Chlorophenol	ND690	2,4-Dinitrophenol	ND3400
1,3-Dichlorobenzene	ND690	4-Nitrophenol	ND3400
1,4-Dichlorobenzene	ND690	Dibenzofuran	ND690
Benzyl alcohol	ND1400	2,4-Dinitrotoluene	ND690
1,2-Dichlorobenzene	ND690	Diethylphthalate	ND690
2-Methylphenol	ND690	4-Chlorophenyl-phenylether	ND690
bis(2-Chloroisopropyl)ether	ND690	Fluorene	ND690
4-Methylphenol	ND690	4-Nitroaniline	ND3400
N-Nitroso-di-n-propylamine	ND690	4,6-Dinitro-2-methylphenol	ND3400
Hexachloroethane	ND690	N-Nitrosodiphenylamine	ND690
Nitrobenzene	ND690	4-Bromophenyl-phenylether	ND690
Isophorone	ND690	Hexachlorobenzene	ND690
2-Nitrophenol	ND690	Pentachlorophenol	ND3400
2,4-Dimethylphenol	ND690	Phenanthrene	ND690
Benzoic acid	ND3400	Anthracene	ND690
bis(2-Chloroethoxy)methane	ND690	Di-n-butylphthalate	ND690
2,4-Dichlorophenol	ND690	Fluoranthene	ND690
1,2,4-Trichlorobenzene	ND690	Pyrene	ND690
Naphthalene	ND690	Butylbenzylphthalate	ND690
4-Chloroaniline	ND1400	3,3'-Dichlorobenzidine	ND1400
Hexachlorobutadiene	ND690	Benzo(a)anthracene	ND690
4-Chloro-3-methylphenol	ND1400	Chrysene	ND690
2-Methylnaphthalene	ND690	bis(2-Ethylhexyl)phthalate	ND690
Hexachlorocyclopentadiene	ND690	Di-n-octylphthalate	ND690
2,4,6-Trichlorophenol	ND690	Benzo(b)fluoranthene	ND690
2,4,5-Trichlorophenol	ND690	Benzo(k)fluoranthene	ND690
2-Chloronaphthalene	ND690	Benzo(a)pyrene	ND690
2-Nitroaniline	ND3400	Indeno(1,2,3-cd)pyrene	ND690
Dimethylphthalate	ND690	Dibenzo(a,h)anthracene	ND690
Acenaphthylene	ND690	Benzo(g,h,i)perylene	ND690
2,6-Dinitrotoluene	ND690		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	84%	Phenol-d <sub>6</sub>	77%
2-Fluorobiphenyl	80%	2-Fluorophenol	80%
Terphenyl	80%	2,4,6-Tribromophenol	79%

Date: 05/06/93

### IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Semivolatile Organic Compounds

Client Sample ID: 519029S02
Sample Date: 04/19/93
Lab Sample ID: Q30416702
Extraction Date: 04/21/93
Analysis Date: 04/26/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND690	3-Nitroaniline	ND3500
bis(2-Chloroethyl)ether	ND690	Acenaphthene	ND690
2-Chlorophenol	ND690	2,4-Dinitrophenol	ND3500
1,3-Dichlorobenzene	ND690	4-Nitrophenol	ND3500
1,4-Dichlorobenzene	ND690	Dibenzofuran	ND690
Benzyl alcohol	ND1400	2,4-Dinitrotoluene	ND690
1,2-Dichlorobenzene	ND690	Diethylphthalate	ND690
2-Methylphenol	ND690	4-Chlorophenyl-phenylether	ND690
bis(2-Chloroisopropyl)ether	ND690	Fluorene	1200
4-Methylphenol	ND690	4-Nitroaniline	ND3500
N-Nitroso-di-n-propylamine	ND690	4,6-Dinitro-2-methylphenol	ND3500
Hexachloroethane	ND690	N-Nitrosodiphenylamine	ND690
Nitrobenzene	ND690	4-Bromophenyl-phenylether	ND690
Isophorone	ND690	Hexachlorobenzene	ND690
2-Nitrophenol	ND690	Pentachlorophenol	ND3500
2,4-Dimethylphenol	ND690	Phenanthrene	2300
Benzoic acid	ND3500	Anthracene	2300
bis(2-Chloroethoxy)methane	ND690	Di-n-butylphthalate	ND690
2,4-Dichlorophenol	ND690	Fluoranthene	ND690
1,2,4-Trichlorobenzene	ND690	Pyrene	ND690
Naphthalene	1600	Butylbenzylphthalate	ND690
4-Chloroaniline	ND1400	3,3'-Dichlorobenzidine	ND1400
Hexachlorobutadiene	ND690	Benzo(a)anthracene	ND690
4-Chloro-3-methylphenol	ND1400	Chrysene	ND690
2-Methylnaphthalene	5700	bis(2-Ethylhexyl)phthalate	ND690
Hexachlorocyclopentadiene	ND690	Di-n-octylphthalate	ND690
2,4,6-Trichlorophenol	ND690	Benzo(b)fluoranthene	ND690
2,4,5-Trichlorophenol	ND690	Benzo(k)fluoranthene	ND690
2-Chloronaphthalene	ND690	Benzo(a)pyrene	ND690
2-Nitroaniline	ND3500	Indeno(1,2,3-cd)pyrene	ND690
Dimethylphthalate	ND690	Dibenzo(a,h)anthracene	ND690
Acenaphthylene	ND690	Benzo(g,h,i)perylene	ND690
2,6-Dinitrotoluene	ND690		
Surrogate Spike Percent Recovery:			=-~
Nitrobenzene-d <sub>5</sub>	87%	Phenol-d	76% <b>7</b> 6%
2-Fluorobiphenyl	80%	2-Fluorophenol	78%
Terphenyl	81%	2,4,6-Tribromophenol	78%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Semivolatile Organic Compounds

Client Sample ID: 519029S03
Sample Date: 04/19/93
Lab Sample ID: Q30416703
Extraction Date: 04/21/93
Analysis Date: 04/27/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND690	3-Nitroaniline	ND3500
bis(2-Chloroethyl)ether	ND690	Acenaphthene	ND690
2-Chlorophenol	ND690	2,4-Dinitrophenol	ND3500
1,3-Dichlorobenzene	ND690	4-Nitrophenol	ND3500
1,4-Dichlorobenzene	ND690	Dibenzofuran	ND690
Benzyl alcohol	ND1400	2,4-Dinitrotoluene	ND690
1,2-Dichlorobenzene	ND690	Diethylphthalate	ND690
2-Methylphenol	ND690	4-Chlorophenyl-phenylether	ND690
bis(2-Chloroisopropyl)ether	ND690	Fluorene	ND690
4-Methylphenol	ND690	4-Nitroaniline	ND3500
N-Nitroso-di-n-propylamine	ND690	4,6-Dinitro-2-methylphenol	ND3500
Hexachloroethane	ND690	N-Nitrosodiphenylamine	ND690
Nitrobenzene	ND690	4-Bromophenyl-phenylether	ND690
Isophorone	ND690	Hexachlorobenzene	ND690
2-Nitrophenol	ND690	Pentachlorophenol	ND3500
2,4-Dimethylphenol	ND690	Phenanthrene	ND690
Benzoic acid	ND3500	Anthracene	ND690
bis(2-Chloroethoxy)methane	ND690	Di-n-butylphthalate	ND690
2,4-Dichlorophenol	ND690	Fluoranthene	ND690
1,2,4-Trichlorobenzene	ND690	Pyrene	ND690
Naphthalene	ND690	Butylbenzylphthalate	ND690
4-Ĉhloroaniline	ND1400	3,3'-Dichlorobenzidine	ND1400
Hexachlorobutadiene	ND690	Benzo(a)anthracene	ND690
4-Chloro-3-methylphenol	ND1400	Chrysene	ND690
2-Methylnaphthalene	ND690	bis(2-Ethylhexyl)phthalate	ND690
Hexachlorocyclopentadiene	ND690	Di-n-octylphthalate	ND690
2,4,6-Trichlorophenol	ND690	Benzo(b)fluoranthene	ND690
2,4,5-Trichlorophenol	ND690	Benzo(k)fluoranthene	ND690
2-Chloronaphthalene	ND690	Benzo(a)pyrene	ND690
2-Nitroaniline	ND3500	Indeno(1,2,3-cd)pyrene	ND690
Dimethylphthalate	ND690	Dibenzo(a,h)anthracene	ND690
Acenaphthylene	ND690	Benzo(g,h,i)perylene	ND690
2,6-Dinitrotoluene	ND690		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	79%	Phenol-d	74%
2-Fluorobiphenyl	76%	2-Fluorophenol	68%
Terphenyl	91%	2,4,6-Tribromophenol	66%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Semivolatile Organic Compounds

Client Sample ID: 519029S04
Sample Date: 04/19/93
Lab Sample ID: Q30416704
Extraction Date: 04/21/93
Analysis Date: 04/27/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND690	3-Nitroaniline	ND3400
bis(2-Chloroethyl)ether	ND690	Acenaphthene	ND690
2-Chlorophenol	ND690	2,4-Dinitrophenol	ND3400
1,3-Dichlorobenzene	ND690	4-Nitrophenol	ND3400
1,4-Dichlorobenzene	ND690	Dibenzofuran	ND690
Benzyl alcohol	ND1400	2,4-Dinitrotoluene	ND690
1,2-Dichlorobenzene	ND690	Diethylphthalate	ND690
2-Methylphenol	ND690	4-Chlorophenyl-phenylether	ND690
bis(2-Chloroisopropyl)ether	ND690	Fluorene	ND690
4-Methylphenol	ND690	4-Nitroaniline	ND3400
N-Nitroso-di-n-propylamine	ND690	4,6-Dinitro-2-methylphenol	ND3400
Hexachloroethane	ND690	N-Nitrosodiphenylamine	ND690
Nitrobenzene	ND690	4-Bromophenyl-phenylether	ND690
Isophorone	ND690	Hexachlorobenzene	ND690
2-Nitrophenol	ND690	Pentachlorophenol	ND3400
2,4-Dimethylphenol	ND690	Phenanthrene	ND690
Benzoic acid	ND3400	Anthracene	ND690
bis(2-Chloroethoxy)methane	ND690	Di-n-butylphthalate	ND690
2,4-Dichlorophenol	ND690	Fluoranthene	ND690
1,2,4-Trichlorobenzene	ND690	Pyrene	ND690
Naphthalene	ND690	Butylbenzylphthalate	ND690
4-Chloroaniline	ND1400	3,3'-Dichlorobenzidine	ND1400
Hexachlorobutadiene	ND690	Benzo(a)anthracene	ND690
4-Chloro-3-methylphenol	ND1400	Chrysene	ND690
2-Methylnaphthalene	ND690	bis(2-Ethylhexyl)phthalate	ND690
Hexachlorocyclopentadiene	ND690	Di-n-octylphthalate	ND690
2,4,6-Trichlorophenol	ND690	Benzo(b)fluoranthene	ND690
2,4,5-Trichlorophenol	ND690	Benzo(k)fluoranthene	ND690
2-Chloronaphthalene	ND690	Benzo(a)pyrene	ND690
2-Nitroaniline	ND3400	Indeno(1,2,3-cd)pyrene	ND690
Dimethylphthalate	ND690	Dibenzo(a,h)anthracene	ND690
Acenaphthylene	ND690	Benzo(g,h,i)perylene	ND690
2,6-Dinitrotoluene	ND690	,1	
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	84%	Phenol-d <sub>6</sub>	80%
2-Fluorobiphenyl	81%	2-Fluorophenol	74%
Terphenyl	92%	2,4,6-Tribromophenol	73%

Date: 05/06/93

Client Project ID: 519029

### IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304166/167

### Semivolatile Organic Compounds

Lab Sample ID: Method Blank Extraction Date: 04/21/93 Analysis Date: 04/27/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND660	3-Nitroaniline	ND3300
bis(2-Chloroethyl)ether	ND660	Acenaphthene	ND660
2-Chlorophenol	ND660	2,4-Dinitrophenol	ND3300
1,3-Dichlorobenzene	ND660	4-Nitrophenol	ND3300
1,4-Dichlorobenzene	ND660	Dibenzofuran	ND660
Benzyl alcohol	ND1300	2,4-Dinitrotoluene	ND660
1,2-Dichlorobenzene	ND660	Diethylphthalate	ND660
2-Methylphenol	ND660	4-Chlorophenyl-phenylether	ND660
bis(2-Chloroisopropyl)ether	ND660	Fluorene	ND660
4-Methylphenol	ND660	4-Nitroaniline	ND3300
N-Nitroso-di-n-propylamine	ND660	4,6-Dinitro-2-methylphenol	ND3300
Hexachloroethane	ND660	N-Nitrosodiphenylamine	ND660
Nitrobenzene	ND660	4-Bromophenyl-phenylether	ND660
Isophorone	ND660	Hexachlorobenzene	ND660
2-Nitrophenol	ND660	Pentachlorophenol	ND3300
2,4-Dimethylphenol	ND660	Phenanthrene	ND660
Benzoic acid	ND3300	Anthracene	ND660
bis(2-Chloroethoxy)methane	ND660	Di-n-butylphthalate	ND660
2,4-Dichlorophenol	ND660	Fluoranthene	ND660
1,2,4-Trichlorobenzene	ND660	Pyrene	ND660
Naphthalene	ND660	Butylbenzylphthalate	ND660
4-Chloroaniline	ND1300	3,3'-Dichlorobenzidine	ND1300
Hexachlorobutadiene	ND660	Benzo(a)anthracene	ND660
4-Chloro-3-methylphenol	ND1300	Chrysene	ND660
2-Methylnaphthalene	ND660	bis(2-Ethylhexyl)phthalate	ND660
Hexachlorocyclopentadiene	ND660	Di-n-octylphthalate	ND660
2,4,6-Trichlorophenol	ND660	Benzo(b)fluoranthene	ND660
2,4,5-Trichlorophenol	ND660	Benzo(k)fluoranthene	ND660
2-Chloronaphthalene	ND660	Benzo(a)pyrene	ND660
2-Nitroaniline	ND3300	Indeno(1,2,3-cd)pyrene	ND660
Dimethylphthalate	ND660	Dibenzo(a,h)anthracene	ND660
Acenaphthylene	ND660	Benzo(g,h,i)perylene	ND660
2,6-Dinitrotoluene	ND660		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	91%	Phenol-d <sub>6</sub>	84%
2-Fluorobiphenyl	85%	2-Fluorophenol	82%
Terphenyl	98%	2,4,6-Tribromophenol	72%

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304166/167

### Total Metals Analysis

Client Sample ID: 519029S01
Sample Date: 04/19/93
Lab Sample ID: Q30416701
Analysis Date: 04/29, 30/93

Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	ND1.0
Barium	7.7
Cadmium	ND0.52
Chromium	2.2
Lead	10.9
Mercury	ND0.09
Selenium	ND0.52
Silver	ND1.0

Client Sample ID: 519029S02 Sample Date: 04/19/93 Lab Sample ID: Q30416702

Analysis Date: 04/29, 30/93

Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	ND1.0
Barium	5.6
Cadmium	ND0.51
Chromium	1.7
Lead	22.5
Mercury	ND0.09
Selenium	ND0.51
Silver	ND1.0

Date: 05/06/93

Client Project ID: 519029

### IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304166/167

### Total Metals Analysis

Client Sample ID: 519029S03 Sample Date: 04/19/93 Lab Sample ID: Q30416703 Analysis Date: 04/29, 30/93

Mercury: 04/20/93

Parameter
Arsenic

ND1.0 Barium 3.0 Cadmium ND0.51 Chromium 1.2 Lead ND5.1 Mercury ND0.10 Selenium ND0.51 Silver ND1.0

Concentration mg/Kg

Client Sample ID: 519029S04 Sample Date: 04/19/93 Lab Sample ID: Q30416704 Analysis Date:

04/29, 30/93

Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	1.1
Barium	8.1
Cadmium	ND0.52
Chromium	2.9
Lead	30.0
Mercury	ND0.10
Selenium	ND0.52
Silver	ND1.0

Client Project ID: 519029

Date: 05/06/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304166/167

Total Metals Analysis

Lab Sample ID: Method Blank Analysis Date:

04/29, 30/93

Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	ND1.0
Barium	ND1.0
Cadmium	ND0.50
Chromium	ND1.0
Lead	ND5.0
Mercury	ND0.10
Selenium	ND0.50
Silver	ND1.0

Date: 05/06/93

Client Project ID: 519029

### IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304166/167

### Total Petroleum Hydrocarbon Analysis

Client Sample ID: See Below Sample Date: 04/19/93

Analysis Date: 04/19/93

Client Sample ID	Lab Sample ID	Concentration mg/Kg
519029S01	Q30416701	31
519029S02	Q30416702	4,000
519029S03	Q30416703	ND17
519029S04	Q30416703	210/72/71*
	Method Blank	ND17

<sup>\*</sup>Sample was analyzed in triplicate.



# ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story 2790 Mosside Boulevard Monroeville, PA 15146 Attn: Tom Mathison

June 29, 1993

Job Number: Q304034/035 Revised

The Certificate of Analysis is for the following:

Client Project ID: 519029
Date Received by Lab: 04/04/93
Number of Samples: One
Sample Type: Soil

### 1.0 Introduction

On April 4, 1993, one soil sample was received at ITAS Pittsburgh, labeled SPC-01.

Results were faxed to Tom Mathison on April 16, 1993.

### 2.0 Analytical Results/Methodology

Results are presented in the enclosed tables and were determined in accordance with Methods 3010, 3520, 3550, 6010, 7470, 8020, 8080, 8240, 8270, 9045, and 9095, Sections 7.1.2.2, 7.3.4.1, and 7.3.4.2, referenced in <u>Test Methods for Evaluating Solid Waste</u>, EPA SW-846, 3rd ed., 1986; Direct flame determination of ignitability; ITAS-Pittsburgh Methodology; Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992; Federal Register, Vol. 55, No. 126, Friday, June 29, 1990.

Results are based on sample concentration and expressed in milligrams per kilogram or parts per million and micrograms per liter or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit. Duplicate results indicate duplicate analysis.

Reviewed and Approved:

Carrie L. Smith, Project Manager

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q304034/035 Revised

### 2.0 <u>Analytical Results/Methodology</u> (Continued)

### Volatile Organic Compounds

Sample SPC-01 was analyzed twice and confirmed matrix interference on the surrogates. Also, the methylene chloride results did not exhibit good repoducibility. Both analyses have been provided.

### TCLP Metals

The spike recoveries for mercury and silver on sample SPC-01 were not within the advisory QC limits.

### 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

Client Project ID: 519029

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

General Chemistry Analysis

Client Sample ID: SPC-01 Sample Date: 04/03/93 Lab Sample ID: Q30403401 Analysis Date: 04/12, 13/93

Compound Concentration mg/Kg

Reactive Cyanide\* ND250

Reactive Sulfide\* ND500

Lab Sample ID: Method Blank Analysis Date: 04/12, 13/93

Compound Concentration mg/Kg

Reactive Cyanide\* ND250

Reactive Sulfide\* ND500

\* Results were determined by methodologies specified in SW-846, 3rd edition, 1986. These methods are prone to failure in both accuracy and reproducibility, therefore, we cannot assume any liability for these results. The reported detection limits are the EPA action levels for this analysis.

Date: 06/29/93

Client Project ID: 519029

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

General Chemistry Analysis

Client Sample ID: SPC-01

Sample Date: 04/03/93 Lab Sample ID: Q30403401

Analysis Date: 04/05/93

Parameter

pН

Ignitability

Paint Filter Liquids Test

Result

5.90/5.91

>140 °F Does not ignite, burn /

>140 °F Does not ignite, burn

Passed, no free liquids / Passed, no free liquids

Date: 06/29/93

Client Project ID: 519029

### IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

### TCLP Metals Analysis

Client Sample ID: SPC-01

Sample Date: 04/03/93

Lab Sample ID: Q30

Q30403501

TCLP Extraction Date:

04/08/93

Analysis Date:

04/14/93

Mercury: 04/12/93

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
Arsenic	ND0.1	100%
Barium	ND0.5	102%
Cadmium	0.006	94%
Chromium	ND0.05	91%
Lead	0.15	95%
Mercury	ND0.0002	64%*
Selenium	ND0.05	99%
Silver	ND0.01	44%*

<sup>\*</sup> Outside QC limits.

Date: 06/29/93

PITTSBURGH, PA Client Project ID: 519029 Job Number: Q304034/035 Revised

IT ANALYTICAL SERVICES

### TCLP Metals Analysis

Lab Sample ID: TCLP Preparation Blank

TCLP Extraction Date: 04/08/93 Analysis Date: 04/14/93

Mercury: 04/12/93

Parameter	Concentration mg/L
Arsenic	ND0.1
Barium	ND0.5
Cadmium	ND0.005
Chromium	ND0.05
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.05
Silver	ND0.01

Client Project ID: 519029

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

### TCLP Metals Analysis

Lab Sample ID: Method Blank

a manage of

Analysis Date: 04/14/93

Mercury: 04/12/93

Parameter	Concentration mg/L
Arsenic	ND0.1
Barium	ND0.5
Cadmium	ND0.005
Chromium	ND0.05
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.05
Silver	ND0.01

Client Project ID: 519029

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

### Volatile Organic Compounds

Client Sample ID: SPC-01 Sample Date: 04/03/93 Lab Sample ID: Q30403401 Analysis Date: 04/08/93

Compound	Concentration
	μg/Kg
Methylene chloride	73
Acetone	ND100
Carbon disulfide	ND5
2-Butanone	ND100
1,1,1-Trichloroethane	ND5
Carbon tetrachloride	1 1 1 1 ND5
Trichloroethene	ND5
1,1,2-Trichloroethane	ND5
Benzene	ND5
4-Methyl-2-pentanone	ND51
Tetrachloroethene	ND5
Toluene	$\sim$ 2.3 $\sim$ 2.0 $\sim$ $ND5$
Chlorobenzene	ND5
Ethylbenzene	ND5
Xylenes (total)	ND5
1,1,2Trichloro-1,2,2 Trifluoromethane	ND5
Ethyl acetate	ND5
Trichlorofluoromethane	ND5
Diethyl ether	ND5

Surrogate 3	Spike
Percent Re	covery

Toluene-d <sub>8</sub>	118%*
Bromofluorobenzene	67%*
1,2-Dichloroethane-d <sub>4</sub>	98%

<sup>\*</sup> Outside QC limits.

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304034/035 Revised

### Volatile Organic Compounds

Client Sample ID: SPC-01 Reanalysis

Sample Date: 04/03/93 Lab Sample ID: Q30403401 Analysis Date: 04/08/93

Compound	Concentration
	$\mu\mathrm{g}/\mathrm{K}\mathrm{g}$
Methylene chloride	46
Acetone	ND100
Carbon disulfide	ND5
2-Butanone	ND100
1,1,1-Trichloroethane	ND5
Carbon tetrachloride	ND5
Trichloroethene	ND5
1,1,2-Trichloroethane	ND5
Benzene	ND5
4-Methyl-2-pentanone	ND51
Tetrachloroethene	ND5
Toluene	ND5
Chlorobenzene	ND5
Ethylbenzene	ND5
Xylenes (total)	ND5
1,1,2Trichloro-1,2,2 Trifluoromethane	ND5
Ethyl acetate	ND5
Trichlorofluoromethane	ND5
Diethyl ether	ND5

Surrogate Spike
Percent Recovery

Toluene-d <sub>8</sub>	125%*
Bromofluorobenzene	70%*
1.2-Dichloroethane-d	104%

<sup>\*</sup> Outside QC limits.

Client Project ID: 519029

Date: 06/29/93

Job Number: Q304034/035 Revised

IT ANALYTICAL SERVICES

PITTSBURGH, PA

## Volatile Organic Compounds

Lab Sample ID: Method Blank Analysis Date: 04/08/93

Compound	Concentration $\mu g/Kg$
Methylene chloride	ND5
Acetone	ND100
Carbon disulfide	ND5
2-Butanone	ND100
1,1,1-Trichloroethane	ND5
Carbon tetrachloride	ND5
Trichloroethene	ND5
1,1,2-Trichloroethane	ND5
Benzene	ND5
4-Methyl-2-pentanone	ND50
Tetrachloroethene	ND5
Toluene	ND5
Chlorobenzene	ND5
Ethylbenzene	, ND5
Xylenes (total)	ND5
1,1,2Trichloro-1,2,2 Trifluoromethane	ND5
Ethyl acetate	ND5
Trichlorofluoromethane	ND5
Diethyl ether	ND5

t.	Surrogate Spike Percent Recovery
Toluene-d <sub>8</sub>	97%
Bromofluorobenzene	85%
1,2-Dichloroethane-d <sub>4</sub>	97%

Date: 06/29/93

Client Project ID: 519029

#### IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## TCLP Volatile Compounds

Client Sample ID: SPC-01

Sample Date: 04/03/93

Lab Sample ID: Q30403501

TCLP Extraction Date: 04/08/93

Analysis Date: 04/13/93

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
Vinyl chloride	ND0.010	66%
1,1-Dichloroethene	ND0.005	94%
Chloroform Agencies	ND0.005	105%
1,2-Dichloroethane	ND0.005	105%
2-Butanone	ND0.010	161%
Carbon Tetrachloride	ND0.005	100%
Trichloroethene	ND0.005	102%
Benzene	ND0.005	100%
Tetrachloroethene	ND0.005	101%
Chlorobenzene	ND0.005	100%

Method Blank 2 Method Blank 2

> Surrogate Spike Percent Recovery

Toluene-d <sub>8</sub>	102%	97%
Bromofluorobenzene	93%	88%
1,2-Dichloroethane-d <sub>4</sub>	100%	98%

Client Project ID: 519029

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## TCLP Volatile Compounds

Lab Sample ID: TCLP Preparation Blank

TCLP Extraction Date: 04/08/93 Analysis Date: 04/13/93

Parameter	Concentration mg/L
Vinyl chloride	ND0.010
1,1-Dichloroethene	ND0.005
Chloroform	ND0.005
1,2-Dichloroethane	ND0.005
2-Butanone	ND0.010
Carbon Tetrachloride	ND0.005
Trichloroethene	ND0.005
Benzene	ND0.005
Tetrachloroethene	ND0.005
Chlorobenzene	ND0.005
Method Blank 1	Surrogate Spike

Method Blank 1	Surrogate Spike Percent Recovery
Toluene-d <sub>8</sub>	95%
Bromofluorobenzene	102%
1,2-Dichloroethane-d <sub>4</sub>	93%

Date: 06/29/93

Client Project ID: 519029

## IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## TCLP Volatile Compounds

Lab Sample ID: Method Blank 1 Analysis Date: 04/12/93

Parameter	Concentration mg/L
Vinyl chloride	ND0.010
1,1-Dichloroethene	ND0.005
Chloroform	ND0.005
1,2-Dichloroethane	ND0.005
2-Butanone	ND0.010
Carbon Tetrachloride	ND0.005
Trichloroethene	ND0.005
Benzene	ND0.005
Tetrachloroethene	ND0.005
Chlorobenzene	ND0.005

e de la companya de l	Surrogate Spike Percent Recovery	
Toluene-d <sub>8</sub>	101%	
Bromofluorobenzene	111%	
1,2-Dichloroethane-d <sub>4</sub>	100%	

Client Project ID: 519029

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## TCLP Volatile Compounds

Lab Sample ID: Method Blank 2

Analysis Date: 04/13/93

Parameter	Concentration mg/L
Vinyl chloride	ND0.010
1,1-Dichloroethene	ND0.005
Chloroform	ND0.005
1,2-Dichloroethane	ND0.005
2-Butanone	ND0.010
Carbon Tetrachloride	ND0.005
Trichloroethene	ND0.005
Benzene	ND0.005
Tetrachloroethene	ND0.005
Chlorobenzene	ND0.005

	Surrogate Spike Percent Recovery
Toluene-d <sub>8</sub>	101%
Bromofluorobenzene	87%
1.2-Dichloroethane-d	92%

Client Project ID: 519029

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## TCLP Semivolatile Compounds

Client Sample ID: SPC-01

Sample Date: 04/03/93 Lab Sample ID: Q30403501

TCLP Extraction Date: 04/08/93

Extraction Date: 04/12/93

Analysis Date: 04/15/93

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
1,4-Dichlorobenzene	ND0.050	48%
Hexachloroethane	ND0.050	46%
Nitrobenzene	ND0.050	54%
Hexachlorobutadiene	ND0.050	57%
2,4,6-Trichlorophenol	ND0.050	63%
2,4,5-Trichlorophenol	ND0.250	64%
2,4-Dinitrotoluene	ND0.050	69%
Hexachlorobenzene	ND0.050	74%
Pentachlorophenol	ND0.250	89%
Total Methylphenol	ND0.050	58%
Pyridine	ND0.250	44%
The first of the second of the second		

## Surrogate Spike Percent Recovery

Nitrobenzene-d <sub>5</sub>	77%	52%
2-Fluorobiphenyl	82%	57%
Terphenyl	81%	65%
Phenol-d <sub>5</sub>	74%	48%
2-Fluorophenol	68%	41%
2,4,6-Tribromophenol	75%	68%

Date: 06/29/93

Client Project ID: 519029

## IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## TCLP Semivolatile Compounds

Lab Sample ID: TCLP Preparation Blank

TCLP Extraction Date: 04/08/93 Extraction Date: 04/12/93 Analysis Date: 04/15/93

Parameter	Concentration mg/L
	mg/ L
1,4-Dichlorobenzene	ND0.050
Hexachloroethane	ND0.050
Nitrobenzene	ND0.050
Hexachlorobutadiene	ND0.050
2,4,6-Trichlorophenol	ND0.050
2,4,5-Trichlorophenol	ND0.250
2,4-Dinitrotoluene	ND0.050
Hexachlorobenzene	ND0.050
Pentachlorophenol	ND0.250
Total Methylphenol	ND0.050
Pyridine	ND0.250

	Surrogate Spike Percent Recovery
Nitrobenzene-d <sub>5</sub>	74%
2-Fluorobiphenyl	81%
Terphenyl	78%
Phenol-d <sub>5</sub>	71%
2-Fluorophenol	69%
2,4,6-Tribromophenol	76%

Client Project ID: 519029

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## TCLP Semivolatile Compounds

Lab Sample ID: Method Blank Extraction Date: 04/12/93 Analysis Date: 04/15/93

Parameter	Concentration mg/L
1,4-Dichlorobenzene	ND0.010
Hexachloroethane	ND0.010
Nitrobenzene	ND0.010
Hexachlorobutadiene	ND0.010
2,4,6-Trichlorophenol	ND0.010
2,4,5-Trichlorophenol	ND0.050
2,4-Dinitrotoluene	ND0.010
Hexachlorobenzene	ND0.010
Pentachlorophenol	ND0.050
Total Methylphenol	ND0.010
Pyridine	ND0.050

	Surrogate Spike Percent Recovery
Nitrobenzene-d <sub>5</sub>	73%
2-Fluorobiphenyl	70%
Terphenyl	78%
Phenol-d <sub>5</sub>	64%
2-Fluorophenol	61%
2,4,6-Tribromophenol	56%

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Client Project ID: 519029 Job Number: Q304034/035 Revised

## Selected Volatile Organic Compounds

Client Sample ID: See below Sample Date: 04/03/93 Analysis Date: 04/14/93

Client Sample ID	Lab Sample ID	Benzene	Toluene	Ethylbenzene	Total Xylenes
			Co	oncentration μg/Kg	
SPC-01	Q30403401	ND2	18	ND2	ND2
	Method Blank	ND2	ND2	ND2	ND2

## Surrogate Spike Percent Recovery:

Client Sample ID	Lab Sample ID	Alpha, Alpha, Alpha- Trifluorotoluene
SPC-01	Q30403401	92%
	Method Blank	88%

Client Project ID: 519029

Date: 06/29/93

IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## Polychlorinated Biphenyls Analysis

Client Sample ID: SPC-01 Sample Date: 04/03/93 Lab Sample ID: Q30403401 Extraction Date: 04/07/93 Analysis Date: 04/15/93

Parameter	Concentration $\mu g/Kg$
Aroclor 1016	ND44
Aroclor 1221	ND44
Aroclor 1232	ND44
Aroclor 1242	ND44
Aroclor 1248	ND44
Aroclor 1254	ND44
Aroclor 1260	ND44

Surrogate Spike
Percent Recovery

Dibutylchlorendate	75%
Tetrachlorometaxylene	62%

Date: 06/29/93

Client Project ID: 519029

## IT ANALYTICAL SERVICES PITTSBURGH, PA

Job Number: Q304034/035 Revised

## Polychlorinated Biphenyls Analysis

Lab Sample ID: Method Blank Extraction Date: 04/07/93 Analysis Date: 04/15/93

Parameter	Concentration μg/Kg
	r-01 0
Aroclor 1016	ND43
Aroclor 1221	ND43
Aroclor 1232	ND43
Aroclor 1242	ND43
Aroclor 1248	ND43
Aroclor 1254	ND43
Aroclor 1260	ND43

Surrogate Spike
Percent Recovery

Dibutylchlorendate	79%
Tetrachlorometaxylene	78%



# ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

IT CORPORATION
2790 MOSSIDE BLVD.
MONROEVILLE, PA 15146-2792
TOM MATHISON

Date: 09/01/93

Work Order: B3-08-294

P.O. Number: 519029

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY
Date Received: 08/24/93
Number of Samples: 6
Sample Type: SOIL

519029-000

#### I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIFICATION	LABORATORY #
1-A-S 01 01	B3-08-294-01
3-F-S 124 02	B3-08-294-02
4-A-S 04 03	B3-08-294-03
8-D-12 203 04	B3-08-294-04
9-E-36 471 05	B3-08-294-05
11-B-24 284 06	B3-08-294-06

Reviewed and Approved:

Jon Bartell Laboratory Director Page: 2 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-08-294

#### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 1-A-S 01 01 SAMPLE DATE: 08/23/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0	mg/L Gasoline	08/25/93	EPA8015_MOD
TPH-D by GC (Mod 8015)		45	7	mg/kg	08/27/93	EPA8015 MOD

Page: 4 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 3-F-S 124 02 SAMPLE DATE: 08/23/93 SAMPLE MATRIX: SOIL

	Note	Reporting				Method				
Test Name	Ref R	esult	Limit	Units	Analyzed	Reference				
TPH-G by GC (Mod 8015)		ND	5.0	mg/L Gasoline	08/25/93	EPA8015 MOD				
TPH-D by GC (Mod 8015)		400	33	mg/kg		EPA8015_MOD				

Page: 5 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 4-A-S 04 03 SAMPLE DATE: 08/23/93 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method	
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0	mg/L Gasoline	08/25/93	EPA8015 MOD
TPH-D by GC (Mod 8015)		120	7	mg/kg	08/27/93	EPA8015_MOD

Page: 6 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 8-D-12 203 04 SAMPLE DATE: 08/23/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit	Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0	mg/L Gasoline	08/25/93	EPA8015 MOD
TPH-D by GC (Mod 8015)		65	7	mg/kg	08/27/93	EPA8015_MOD

Page: 7 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 9-E-36 471 05 SAMPLE DATE: 08/23/93 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method	
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0	mg/L Gasoline		EPA8015 MOD
TPH-D by GC (Mod 8015)		790	69	mg/kg	08/30/93	EPA8015_MOD

Page: 8 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 11-B-24 284 06 SAMPLE DATE: 08/23/93 SAMPLE MATRIX: SOIL

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	Note		Reporting	Date	Method	
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0	mg/L Gasoline	08/25/93	EPA8015_MOD
TPH-D by GC (Mod 8015)		380	34	mg/kg	08/30/93	EPA8015_MOD

Page: 9 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-08-294

#### Referenced notes for this work order:

B308294

TPH HIGH BOILERS WERE QUANTED AGAINST HAVOLINE SAE FORMULA 3 30 W MOTOR OIL.

Page: 10 of 10

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-08-294

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-G by GC (Mod 8015)

TEST CODE TPH G

TPH-Extractable Petroleum Hydrocarbons

Modified EPA Method 8015 by purge-and-trap GC with FID detection. Quantitation of sample components as gasoline.

TEST NAME TPH-D by GC (Mod 8015) TEST CODE TPH\_GC

TPH-Extractable Petroleum Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.

SOLUTION LOG #  0823,193-001	814-F	ns Laboratories B Greenbrier Ci sapeake, VA 233	ircle ,	044444 04 000 4 0 4 4 4 4 4 4 4 4 4 4 4															
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	MATRIX	PRESERVATION	SAMPLING	☐ SH C	rease 503 E	1 1	l l		TCLP Metals	Silver □ Metals	Flash	1		□ cop □					
	Air Sludge Liquid Other	HCI HNO3 H2SO4 NaOH Ice None	Date Time	трн сс	Oil & Grease BTEX only	EPA 602 □	EPA 608	EPA 615 □	TCLP N	Silver ☐ Meta	Corr	Phenols	Ammonia 🗆	BOD					
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# ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

IT CORPORATION
2790 MOSSIDE BLVD.
MONROEVILLE, PA 15146-2792
TOM MATHISON

Date: 08/06/93

Work Order: B3-07-293

P.O. Number: 519029

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY
Date Received: 07/29/93
Number of Samples: 9
Sample Type: SOIL

to the end of the

519029-000

#### I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIFIC	<u>ATION</u>	<u>LABORATORY #</u>
20-A-24	SOL# 01	В3-07-293-01
19-E-48	SOL# 02	B3-07-293-02
531-16-B-48	SOL# 03	B3-07-293-03
238-15-F-12	SOL# 04	В3-07-293-04
393-15-A-36	SOL# 05	B3-07-293-05
518-14-A-48	SOL# 06	B3-07-293-06
223 13-E-12	SOL# 07	В3-07-293-07
238	SOL# 08	B3-07-293-08
18-D-5	SOL# 09	B3-07-293-09

Reviewed and Approve

Jon Bartell

Laboratory Director

Page: 2 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-07-293

#### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000 Work Order: B3-07-293

SAMPLE ID: 20-A-24

SOL# 01

SAMPLE DATE: 07/21/93 08:05:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit Units		Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg	Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	310	2 mg/kg		08/02/93	EPA8015 MOD

#### Referenced notes for these results:

Page: 4 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B3-07-293

SAMPLE ID: 19-E-48

SOL# 02

SAMPLE DATE: 07/21/93 08:37:00

SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg Gasoline	08/01/93	EPA8015 MOD
TPH-D by GC (Mod 8015)		ND	2 mg/kg	08/02/93	EPA8015 MOD

519029-000

Page: 5 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-07-293

SAMPLE ID: 531-16-B-48 SOL# 03

SAMPLE DATE: 07/27/93 09:45:00

SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg Gasoline	08/01/93	EPA8015 MOD
TPH-D by GC (Mod 8015)	1	780	9 mg/kg	08/02/93	EPA8015 MOD

#### Referenced notes for these results:

Page: 6 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

(012) 072-0004

519029-000

Work Order: B3-07-293

SAMPLE ID: 238-15-F-12

SOL# 04

SAMPLE DATE: 07/27/93 09:50:00

SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg Gasoline	08/01/93	EPA8015 MOD
TPH-D by GC (Mod 8015)	1	240	2 mg/kg	08/02/93	EPA8015 MOD

#### Referenced notes for these results:

Page: 7 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-07-293

SAMPLE ID: 393-15-A-36

SOL# 05

SAMPLE DATE: 07/27/93 10:04:00

SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg Gasoline	08/01/93	EPA8015 MOD
TPH-D by GC (Mod 8015)	1	690	9 mg/kg	08/02/93	EPA8015 MOD

#### Referenced notes for these results:

Page: 8 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000 Work Order: B3-07-293

SAMPLE ID: 518-14-A-48

SOL# 06

SAMPLE DATE: 07/27/93 10:25:00

SAMPLE MATRIX: SOIL

	Note	1	Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	750	9 mg/kg	08/02/93	EPA8015_MOD

#### Referenced notes for these results:

Page: 9 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B3-07-293

SAMPLE ID: 223 13-E-12

SOL# 07

SAMPLE DATE: 07/27/93 10:37:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit Units		Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg	Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	170	2 mg/kg		08/02/93	EPA8015_MOD

519029-000

#### Referenced notes for these results:

The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel. Sample results are based on wet weight basis; there was insufficient sample for dry weight analysis. Page: 10 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B3-07-293

SAMPLE ID: 238

SOL# 08

SAMPLE DATE: 07/27/93 09:50:00

SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg Gasoline	08/01/93	EPA8015 MOD
TPH-D by GC (Mod 8015)	1	150	2 mg/kg	08/02/93	EPA8015 MOD

519029-000

#### Referenced notes for these results:

Page: 11 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-07-293

SAMPLE ID: 18-D-5

SOL# 09

SAMPLE DATE: 07/27/93 11:26:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit Unit	.s	Analyzed	Reference
TPH-G by GC (Mod 8015)		ND	5.0 mg/k	g Gasoline	08/01/93	EPA8015 MOD
TPH-D by GC (Mod 8015)	1	150	2 mg/k			EPA8015 MOD

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#### Referenced notes for these results:

Page: 12 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-07-293

#### Referenced notes for this work order:

B307293

SAMPLE ID'S FOR FRACTIONS -01A, B AND -02A, B WERE CHANGED FROM THAT LISTED ON THE COC AT CLIENT'S REQUEST.

Page: 13 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B3-07-293

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPE-G by GC (Mod 8015)

TEST CODE TPH G

TPH-Extractable

Petroleum Hydrocarbons Modified EPA Method 8015 by purge-and-trap GC with FID detection. Quantitation of sample

519029-000

components as gasoline.

TEST NAME TPH-D by GC (Mod 8015)

TEST CODE TPH GC

TPH-Extractable Petroleum

Petroleum Hydrocarbons EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



# ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

IT CORPORATION 2790 MOSSIDE BLVD. MONROEVILLE, PA 15146-2792 TOM MATHISON Date: 10/25/93

Work Order: B3-10-167

P.O. Number: 519029

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY/KEROSENE

519029-000

Date Received: 10/14/93 Number of Samples: 21 Sample Type: SAND/SOIL

#### I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIFICATION	<u>LABORATORY #</u>
E-16-352 √	B3-10-167-01
C-16-310 /	B3-10-167-02
C-14-308 /	B3-10-167-03
E-13-349 /	B3-10-167-04
D-12-325 '	B3-10-167-05
E-11-347	B3-10-167-06
C-10-304	B3-10-167-07
D-6-331	B3-10-167-08
C-5-229 (	B3-10-167-09
D-4-333 -	B3-10-167-10
E-15-477	B3-10-167-11

Reviewed and Approved:

Jon Bartell

Laberatory Director

Page: 2 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

519029-000

Work Order: B3-10-167

## Samples, continued from above:

SAMPLE IDENTIFICATION	LABORATORY #
C-15-435	B3-10-167-12
D-14-449	B3-10-167-13
C-13-433	B3-10-167-14
E-12-474	B3-10-167-15
C-10-430	B3-10-167-16
E-7-469	B3-10-167-17
C-6-426	B3-10-167-18
E-4-466	B3-10-167-19
C-4-424	B3-10-167-20
F-15-490	B3-10-167-21

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: E-16-352 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date Method
Test Name	Ref	Result	Limit	Units	Analyzed Reference
TPH-D by GC (Mod EPA8015)		300	7	mg/kg	10/21/93 EPA8015_MOD

Page: 4 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: C-16-310 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	<u>Limit</u>	Units	Analyzed	Reference
TPH-D by GC (Mod EPA8015)		300	9	mg/kg	10/21/93	EPA8015 MOD

Page: 5 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: C-14-308 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (Mod EPA8015)		140	3 mg/kg	10/21/93 EPA8015 MOD

Page: 6 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: E-13-349 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	<u>Result</u>	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (Mod EPA8015)		80	2 mg/kg	10/19/93	EPA8015 MOD

Page: 7 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: **D-12-325** SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
TPH-D by GC (Mod EPA8015)		100	2	ma/ka	10/19/93	EPA8015 MOD

Page: 8 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

012) 092-0004

Work Order: B3-10-167

SAMPLE ID: E-11-347
SAMPLE DATE: 10/13/93
SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit Units	Analyzed Reference
TPH-D by GC (Mod EPA8015)		48	2 mg/kg	10/19/93 EPA8015_MOD

Page: 9 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

SAMPLE ID: C-10-304
SAMPLE DATE: 10/13/93
SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	<u>Result</u>	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (Mod EPA8015)		170	2 mg/kg	10/19/93	EPA8015 MOD

Page: 10 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

SAMPLE ID: D-6-331 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (Mod EPA8015)		450	9 mg/kg	10/21/93	EPA8015 MOD

Page: 11 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: C-5-229 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note	:	Reporting	Date	Method
Test Name	Ref	<u>Result</u>	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (Mod EPA8015)		420	17 mg/kg	10/21/93	EPA8015_MOD

Page: 12 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: D-4-333 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date Method
Test Name	Ref	Result	Limit	Units	Analyzed Reference
TPH-D by GC (Mod EPA8015)		41	2	mg/kg	10/22/93 EPA8015_MOD

Page: 13 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: E-15-477 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	_ Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (Mod EPA8015)		2900	90 mg/kg	10/21/93 EPA8015_MOD

Page: 14 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

SAMPLE ID: C-15-435 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
TPH-D by GC (Mod EPA8015)		270	9	mg/kg	10/21/93	EPA8015 MOD

Page: 15 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

SAMPLE ID: D-14-449
SAMPLE DATE: 10/13/93
SAMPLE MATRIX: SOIL

	Note	Reporting		Date	Method
Test Name	Ref	Result	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (Mod EPA8015)		3300	36 mg/kg	10/22/93	EPA8015_MOD

Page: 16 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: C-13-433 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (Mod EPA8015)		180	3 mg/kg	10/22/93	EPA8015 MOD

Page: 17 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B3-10-167

SAMPLE ID: E-12-474
SAMPLE DATE: 10/13/93
SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit U	nits	Analyzed	Reference
TPH-D by GC (Mod EPA8015	)	68	2 m	g/kg	10/19/93	EPA8015 MOD

Page: 18 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

**AUSTIN, TX** 

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: C-10-430 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	Units	<u>Analyzed</u>	Reference
TPH-D by GC (Mod EPA8015)		360	18	mg/kg	10/21/93	EPA8015_MOD

Page: 19 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: E-7-469 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit Units	Analyzed Reference
TPH-D by GC (Mod EPA8015)		620	13 mg/kg	10/21/93 EPA8015_MOD

Page: 20 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

SAMPLE ID: C-6-426 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note		Reporting		Date Method
Test Name	Ref	Result	<u>Limit</u>	Units	Analyzed Reference
TPH-D by GC (Mod EPA8015)		290	13	mg/kg	10/21/93 EPA8015 MOD

Page: 21 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: E-4-466 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

	Note	Reporting		Date	Method	
Test Name	<u>Ref</u>	Result	Limit	<u>Units</u>	<u>Analyzed</u>	Reference
TPH-D by GC (Mod EPA8015)		500	17	mg/kg	10/21/93	EPA8015_MOD

Page: 22 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 802-6684

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: C-4-424
SAMPLE DATE: 10/13/93
SAMPLE MATRIX: SOIL

	Note	Reporting		Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (Mod EPA8015)		210	9 mg/kg	10/21/93 EPA8015 MOD

Page: 23 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

SAMPLE ID: F-15-490 SAMPLE DATE: 10/13/93 SAMPLE MATRIX: SOIL

•	Note	Reporting		Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (Mod EPA8015)		130	2 mg/kg	10/21/93	EPA8015 MOD

Page: 24 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

519029-000

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684 Work Order: B3-10-167

## Referenced notes for this work order:

B310167

ALL SAMPLES WERE QUANTED AGAINST A KEROSENE STANDARD. THE PATTERNS DID NOT APPEAR TO BE KEROSENE. THE PEAKS WERE LATE ELUTERS THAT COULD BE A MOTOR OIL.

Page: 25 of 25

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B3-10-167

## IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (Mod EPA8015) TEST CODE TPH\_GC

TPH-Extractable
Petroleum
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story

April 7, 1994

2790 Mosside Boulevard Monroeville, PA 15146 Attn: Tom Mathison

Job Number: Q403298/299

The Certificate of Analysis is for the following:

Client Project ID:

519029

Date Received by Lab:

03/24/94

Number of Samples:

Thirty-three

Sample Type:

Soil

## 1.0 Introduction

On March 24, 1994 thirty-three samples were received at ITAS Pittsburgh, labeled as follows:

349E-032394	273A-032394
280B-032394	315C-032394
322D-032394	357E-032394
322D DUP-032394	332D-032394
364F-032394	374F-032394
275B-032394	260A-032394
270A-032394	302C-032394
312C-032394	344E-032394
354E-032394	285B-032394
317D-032394	285B DUP-032394
359F-032394	327D-032394
	280B-032394 322D-032394 322D DUP-032394 364F-032394 275B-032394 270A-032394 312C-032394 354E-032394 317D-032394

## 2.0 Analytical Results/Methodology

The analysis for Methods 9071/418.1, and 8015-Diesel were performed at our ITAS Laboratory in Austin, Texas. These results will follow under separate cover.

Results are presented in the enclosed tables, and were determined in accordance with Method 8015, <u>Test Methods for Evaluating Solid Waste</u>, EPA SW-846, 3rd ed., 1986.

Reviewed and Approved:

Carrie L. Smith-Gamber, Project Manager

American Council of Independent Laboratories International Association of Environmental Testing Laboratories American Association for Laboratory Accreditation

Date: 04/07/94

Job Number: Q403298/299 Client Project ID: 519029 IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

# 2.0 Analytical Results/Methodology (Continued)

Results of sample concentrations are based on dry weight and expressed in milligrams per kilogram or parts per million. ND denotes that the compound is not detected at or above the indicated detection limit.

## 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story Date: 04/07/94 Job Number: Q403298/299 Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

# Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below Sample Date: 03/23/94

Analysis Date: 03/27, 28, 29, 30/94

Client Sample ID	Lab Sample ID	Gasoline µg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
294B-032394	Q40329801	ND6200	75%
336D-032394	Q40329802	ND6200	78%
378F-032394	Q40329803	ND6200	68%
255A-032394	Q40329804	ND6100	75%
297C-032394	Q40329805	ND6200	74%
339E-032394	Q40329806	ND6400	74%
290B-032394	Q40329807	ND6300	91%
290B DUP-032394	Q40329808	ND6100	89%
369F-032394	Q40329809	ND6200	88%
265A-032394	Q40329810	ND6400	89%
307C-032394	Q40329811	ND6500	90%
349E-032394	Q40329812	ND6300	82%
280B-032394	Q40329813	ND6500	88%
322D-032394	Q40329814	ND6700	87%
322D DUP-032394	Q40329815	ND6400	87%
364F-032394	Q40329816	ND6400	89%
275B-032394	Q40329901	ND6100	83%
270A-032394	Q40329902	ND6200	88%
312C-032394	Q40329903	ND6200	97%
354E-032394	Q40329904	ND7500	77%
317D-032394	Q40329905	ND7100	83%

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

# Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below Sample Date: 03/23/94

Analysis Date: 03/27, 28, 29, 30/94

Client Sample ID	Lab Sample ID	Gasoline	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
359F-032394	Q40329906	ND6200	80%
273A-032394	Q40329907	ND6200	80%
315C-032394	Q40329908	ND6700	79%
357E-032394	Q40329909	ND6600	81%
332D-032394	Q40329910	ND6500	86%
374F-032394	Q40329911	ND6500	81%
260A-032394	Q40329912	ND6400	90%
302C-032394	Q40329913	ND6200	99%
344E-032394	Q40329914	ND6200	89%
285B-032394	Q40329915	ND6200	92%
285B DUP-032394	Q40329916	ND6400	89%
327D-032394	Q40329917	ND6400	81%
	Method Blank 03/27/94	ND6200	74%
	Method Blank 03/28/94	ND6200	82%
	Method Blank 03/29/94	ND6200	82%
<del></del> .	Method Blank 03/30/94	ND6200	82%

IT Corporation/Fort Story Date: 04/07/94 Job Number: Q403298/299 Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

# Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below

Sample Date: 03/23/94 Analysis Date: 03/29/94

Client Sample ID	Lab Sample ID	Gasoline Percent Recovery	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
364F-032394 MS	Q40329818	66%	96%
364F-032394 MSD/DUP	Q40329817	70%	98%
327D-032394 MS	Q40329919	60%	90%
327D-032394 MSD/DUP	Q40329918	63%	99%



# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story 2790 Mosside Boulevard Monroeville, PA 15146

April 8, 1994

Attn: Tom Mathison

Job Number: Q403275/276 Revised

The Certificate of Analysis is for the following:

Client Project ID: 519029
Date Received by Lab: 03/23/94
Number of Samples: Thirty-two

Sample Type: Soil

## 1.0 Introduction

On March 23, 1994, thirty-two soil samples were received at ITAS Pittsburgh, labeled as follows:

01A-032294	30B DUP-032294	64D-032294	94E-032294
05A-032294	35B-032294	67D-032294	99E-032294
10A-032294	40B-032294	72D-032294	104E-032294
15A-032294	43C-032294	77D-032294	106F-032294
20A-032294	47C-032294	82D-032294	109F-032294
22B-032294	52C-032294	82D DUP-032294	114F-032294
25B-032294	57C-032294	85E-032294	119F-032294
30B-032294	62C-032294	89E-032294	124F-032294

The analysis for TPH diesel is being performed at our ITAS laboratory in Austin, Texas. These results will follow under separate cover upon completion.

## 2.0 Analytical Results/Methodology

Results are presented in the enclosed tables and were determined in accordance with Methods 8015 and 9071, <u>Test Methods for Evaluating Solid Waste</u>, EPA SW-846, 3rd ed., 1986; Method 418.1, <u>Method for the Chemical Analysis of Water and Waste</u>, EPA, 600/4-79-020, 1983 revision.

Reviewed and Approved:

Carrie L. Smith-Gamber, Project Manager

American Council of Independent Laboratories International Association of Environmental Testing Laboratories American Association for Laboratory Accreditation

Date: 04/08/94

Job Number: Q403275/276 Revised

Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

## 2.0 Analytical Results/Methodology (Continued)

Results are based on sample concentration and expressed in milligrams per kilogram or parts per million and micrograms per kilogram or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit.

## 8015 - Gasoline

All samples were analyzed using methanol dilutions which slightly elevated detection limits. However, this did not cause detection limits to be above the client action level.

## 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story
Date: 04/08/94
Job Number: Q403275/276 Revised
Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

# Total Petroleum Hydrocarbons

Client Sample ID: Sample Date: See below Sample Date: 03/22/94 Analysis Date: 03/26 and 28/94

Client Sample ID	Lab Sample ID	Concentration mg/Kg
01A-032294	Q40327510	700
05A-032294	Q40327601	120
10A-032294	Q40327615	120
15A-032294	Q40327603	180
20A-032294	Q40327501	520
22B-032294	Q40327505	120
25B-032294	Q40327503	97
30B-032294	Q40327609	190
30B DUP-032294	Q40327607	190
35B-032294	Q40327612	110
40B-032294	Q40327513	82
43C-032294	Q40327511	75
47C-032294	Q40327602	150
52C-032294	Q40327506	210
57C-032294	Q40327604	120
62C-032294	Q40327606	550
64D-032294	Q40327504	90
67D-032294	Q40327502	190
72D-032294	Q40327613	130
77D-032294	Q40327605	88
82D-032294	Q40327515	490
82D DUP-032294	Q40327516	380/420
85E-032294	Q40327512	360
89E-032294	Q40327611	370
94E-032294	Q40327610	360
99E-032294	Q40327614	150
104E-032294	Q40327508	310
106F-032294	Q40327507	340
109F-032294	Q40327509	160
114F-032294	Q40327608	230
119F-032294	Q40327616	2700*/4000*
124F-032294	Q40327514	480
	Method Blank 03/26/94	ND17
	Method Blank 03/28/94	ND17

Date: 04/08/94

Constitution of the contract of the

Job Number: Q403275/276 Revised

Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

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Total Petroleum Hydrocarbons Matrix Spike Percent Recovery

Client Sample ID:

See below

Sample Date:

03/22/94

Analysis Date:

03/26 and 28/94

Client Sample ID

Lab Sample ID

Matrix Spike Percent Recovery

82D DUP-032294

Q40327516

117%

119F-032294

Q40327616

1400%\*

<sup>\*</sup>Due to the level of petroleum hydrocarbons present in this sample, the sample, duplicate, and matrix spike all had to be diluted which resulted in the reported values.

Date: 04/08/94
Job Number: Q403275/276 Revised

Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

# Total Petroleum Hydrocarbons Range Organics - Low Boilers

Client Sample ID: See below Sample Date: 03/22/94

Analysis Date: 03/26, 27, 28/94

Client Sample ID	Lab Sample ID	Gasoline µg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
01A-032294	Q40327510	ND7100	75%
05A-032294	Q40327601	ND6500	69%
10A-032294	Q40327615	ND6200	76%
15A-032294	Q40327603	ND6500	68%
20A-032294	Q40327501	ND6100	75%
22B-032294	Q40327505	ND6900	77%
25B-032294	Q40327503	5700	93%
30B-032294	Q40327609	ND6100	76%
30B DUP-032294	Q40327607	ND6500	69%
35B-032294	Q40327612	ND6200	76%
40B-032294	Q40327513	ND6600	73%
43C-032294	Q40327511	ND6700	73%
47C-032294	Q40327602	ND6500	69%
52C-032294	Q40327506	ND6400	83%
57C-032294	Q40327604	ND6000	68%
62C-032294	Q40327606	ND7400	68%
64D-032294	Q40327504	ND6200	77%
67D-032294	Q40327502	ND6200	80%
72D-032294	Q40327613	ND6200	76%
77D-032294	Q40327605	ND6500	69%
82D-032294	Q40327515	ND6400	72%
82D DUP-032294	Q40327516	ND6600	74%
85E-032294	Q40327512	ND6600	74%
89E-032294	Q40327611	ND6200	65%
94E-032294	Q40327610	ND6000	76%
99E-032294	Q40327614	ND6300	73%
104E-032294	Q40327508	ND6100	78%
106F-032294	Q40327507	ND6200	78%
109F-032294	Q40327509	ND6400	75%
114F-032294	Q40327608	ND6200	75%
119F-032294	Q40327616	ND6100	73%
124F-032294	Q40327514	ND6000	73%
	Method Blank 03/26/94	ND6200	72%

Date: 04/08/94 Job Number: Q403275/276 Revised

Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

# Total Petroleum Hydrocarbons - Low Boilers (Continued)

Client Sample ID: Sample Date: See below

Sample Date: 03/22/94 Analysis Date: 03/26, 27, 28/94

Client Sample ID	Lab Sample ID	Gasoline µg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
<del></del>	Method Blank 03/27/94	ND6200	74%
	Method Blank 03/28/94	ND6200	82%

IT Corporation/Fort Story Date: 04/08/94 Job Number: Q403275/276 Revised Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

# Total Petroleum Hydrocarbons Range Organics - Low Boilers

Client Sample ID: See below

Sample Date: 03/22/94

Analysis Date: 03/26, 27, 28/94

Client Sample ID	Gasoline Percentage Recovery	Surrogate Percent Recovery	
20A-032294	68%/67%	101%/96%	
119F-032294	67%/98%	101%/111%	



# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story 2790 Mosside Boulevard Monroeville, PA 15146

April 5, 1994

Attn: Tom Mathison

Job Number: Q403275/276

The Certificate of Analysis is for the following:

Client Project ID: Date Received by Lab: 519029 03/23/94

Number of Samples:

Thirty-two

Sample Type:

Soil

### 1.0 Introduction

On March 23, 1994, thirty-two soil samples were received at ITAS Pittsburgh, labeled as follows:

01A-032294	30B DUP-032294	64D-032294	94E-032294
05A-032294	35B-032294	67D-032294	99E-032294
10A-032294	40B-032294	72D-032294	104E-032294
15A-032294	43C-032294	77D-032294	106F-032294
20A-032294	47C-032294	82D-032294	109F-032294
22B-032294	52C-032294	82D DUP-032294	114F-032294
25B-032294	57C-032294	85E-032294	119F-032294
30B-032294	62C-032294	89E-032294	124F-032294

The analysis for TPH diesel is being performed at our ITAS laboratory in Austin, Texas. These results will follow under separate cover upon completion.

#### 2.0 Analytical Results/Methodology

Results are presented in the enclosed tables and were determined in accordance with Methods 8015 and 9071, <u>Test Methods for Evaluating Solid Waste</u>, EPA SW-846, 3rd ed., 1986; Method 418.1, <u>Method for the Chemical Analysis of Water and Waste</u>, EPA, 600/4-79-020, 1983 revision.

Reviewed and Approved:

Carrie L. Smith-Gamber, Project Manager

American Council of Independent Laboratories International Association of Environmental Testing Laboratories American Association for Laboratory Accreditation

Date: 04/05/94

Job Number: Q403275/276 Client Project ID: 519029 IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

#### 2.0 Analytical Results/Methodology (Continued)

Results are based on sample concentration and expressed in milligrams per kilogram or parts per million and micrograms per kilogram or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit.

#### 8015 - Gasoline

All samples were analyzed using methanol dilutions which slightly elevated detection limits. However, this did not cause detection limits to be above the client action level.

### 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

Date: 04/05/94

Job Number: Q403275/276 Client Project ID: 519029 IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

## Total Petroleum Hydrocarbons

Client Sample ID: See below Sample Date: 03/22/94

Analysis Date: 03/26 and 28/94

Client Sample ID	Lab Sample ID	Concentration mg/Kg
01A-032294	Q40327510	700
05A-032294	Q40327601	120
10A-032294	Q40327615	120
15A-032294	Q40327603	180
20A-032294	Q40327501	520
22B-032294	Q40327505	120
25B-032294	Q40327503	97
30B-032294	Q40327609	190
30B DUP-032294	Q40327607	190
35B-032294	Q40327612	110
40B-032294	Q40327513	82
43C-032294	Q40327511	75
47C-032294	Q40327602	150
52C-032294	Q40327506	210
57C-032294	Q40327604	120
62C-032294	Q40327606	550
64D-032294	Q40327504	90
67D-032294	Q40327502	190
72D-032294	Q40327613	130
77D-032294	Q40327605	88
82D-032294	Q40327515	490
82D DUP-032294	Q40327516	380/420
85E-032294	Q40327512	360
89E-032294	Q40327611	370
94E-032294	Q40327610	360
99E-032294	Q40327614	150
104E-032294	Q40327508	310
106F-032294	Q40327507	340
109F-032294	Q40327509	160
114F-032294	Q40327608	230
119F-032294	Q40327616	2700*/4000*
124F-032294	Q40327514	480
	Method Blank 03/26/94	ND17
	Method Blank 03/28/94	ND17

\*Due to the level of petroleum hydrocarbons present in this sample, the sample duplicate, and matrix spike all had to be diluted which resulted in the reported values.

\* su rust page

Date: 04/05/94

Job Number: Q403275/276 Client Project ID: 519029 IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

Total Petroleum Hydrocarbons Matrix Spike Percent Recovery

Client Sample ID:

See below

Sample Date:

03/22/94

Analysis Date:

03/26 and 28/94

Client Sample ID

Lab Sample ID

Matrix Spike

Percent Recovery

82D DUP-032294

Q40327516

117%

119F-032294

Q40327616

1400%\*

<sup>\*</sup>Due to the level of petroleum hydrocarbons present in this sample, the sample, duplicate, and matrix spike all had to be diluted which resulted in the reported values.

IT Corporation/Fort Story Date: 04/05/94 Job Number: Q403275/276 Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

## Total Petroleum Hydrocarbons Range Organics - Low Boilers

Client Sample ID: See below Sample Date: 03/22/94 Analysis Date: 03/26, 27, 28/94

Client Sample ID	Lab Sample ID	$\frac{\text{Gasoline}}{\mu \text{g}/\text{Kg}}$	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
01A-032294	Q40327510	ND7100	75%
05A-032294	Q40327601	ND6500	69%
10A-032294	Q40327615	ND6200	76%
15A-032294	Q40327603	ND6500	68%
20A-032294	Q40327501	ND6100	75%
22B-032294	Q40327505	ND6900	77%
25B-032294	Q40327503	5700	93%
30B-032294	Q40327609	ND6100	76%
30B DUP-032294	Q40327607	ND6500	69%
35B-032294	Q40327612	ND6200	76%
40B-032294	Q40327513	ND6600	73%
43C-032294	Q40327511	ND6700	73%
47C-032294	Q40327602	ND6500	69%
52C-032294	Q40327506	ND6400	83%
57C-032294	Q40327604	ND6000	68%
62C-032294	Q40327606	ND7400	68%
64D-032294	Q40327504	ND6200	77%
67D-032294	Q40327502	ND6200	80%
72D-032294	Q40327613	ND6200	76%
77D-032294	Q40327605	ND6500	69%
82D-032294	Q40327515	ND6400	72%
82D DUP-032294	Q40327516	ND6600	74%
85E-032294	Q40327512	ND6600	74%
89E-032294	Q40327611	ND6200	65%
94E-032294	Q40327610	ND6000	76%
99E-032294	Q40327614	ND6300	73%
104E-032294	Q40327508	ND6100	78%
106F-032294	Q40327507	ND6200	78%
109F-032294	Q40327509	ND6400	75%
114F-032294	Q40327608	ND6200	75%
119F-032294	Q40327616	ND6100	73%

Job Number: Q403275/276 Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

## Total Petroleum Hydrocarbons - Low Boilers (Continued)

Client Sample ID: See below

Sample Date: 03/22/94 Analysis Date: 03/26, 27, 28/94

Client Sample ID	Lab Sample ID	Gasoline μg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
124F-032294	Q40327514	ND6000	73%
<u></u>	Method Blank 03/26/94	ND6200	72%
• • • • • • • • • • • • • • • • • • •	Method Blank 03/27/94	ND6200	74%
<del></del>	Method Blank 03/28/94	ND6200	82%

Date: 04/05/94

Job Number: Q403275/276 Client Project ID: 519029 IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

## Total Petroleum Hydrocarbons Range Organics - Low Boilers

Client Sample ID: See below Sample Date: 03/22/94

Analysis Date: 03/26, 27, 28/94

Client Sample ID Matrix Spike
Percent Recovery

20A-032294 101%/96%

119F-032294

101%/111%

## **Cooler Receipt Form**

Proje	LIMS No. Q403275 Q40327	<u>b</u>
Use o	other side of this form to note details concerning check-in problems.	
A.	Preliminary Examination Phase:	. )
	Date cooler opened: 3/23/94 C-of-C No.: 453295/453294/4(755	<u>3/4136</u> 03
	By (print) Bob Fintag (sign) Boltantay	<del>/</del>
1.	Did cooler come with a shipping slip (air bill, etc.)?	) No
	If YES, enter carrier name & air bill no. here: 9710126193	
2.	Were custody seals on outside of cooler?	) No
	How many & where: a Left front Right real	
	Seal date: NA Seal name:	
3.	Were custody seals unbroken and intact at the date and time of arrival:	No
4.	Did you screen samples for radioactivity using the Geiger Counter: Yes	No.
5.	Were custody papers sealed in a plastic bag and taped inside of the lid?	) No
6.	Were custody papers filled out properly (ink, signed, etc.)?	No
7.	Did you sign custody papers in the appropriate place?	No
8.	Was project identifiable from custody papers?	No
	If YES, enter project name at the top of this form.	
9.	If required, was enough ice used?	) No
	Type of ice: TCE CUBES	
10.	Have designated person initial here to acknowledge receipt of cooler: 3/33	194
		·
B.	SLog-in Phase:	
	Date samples were logged-in: 3/23/94 By (print) Boo finan (sign) Bot-finan	
11.	Describe type of packing in cooler: Vermiculite Styreton hoads Lice has	
12.	Were all bottles sealed in separate plastic bags?	No
13.	Did all bottles arrive unbroken & were labels in good condition?	No
14.	Were all bottle labels complete (ID, date, time, signature, preservative, etc.)?	No
15.	Did all bottle labels agree with custody papers?	No
16.	Were correct containers used for the test indicated?	No
17.	Were correct preservatives added to samples?	No
18.		
	Man a settinina and the second of the second	No
19.	Was a sufficient amount of sample sent for tests indicated?	No No
19.	Was a sufficient amount of sample sent for tests indicated?  Were bubbles absent in volatile samples?  Yes	No No
<ul><li>19.</li><li>20.</li></ul>	Was a sufficient amount of sample sent for tests indicated?  Were bubbles absent in volatile samples?  If NO, list by sample number:  Was the project manager called and etcharding to the project manage	No
	Was a sufficient amount of sample sent for tests indicated?  Were bubbles absent in volatile samples?  If NO, list by sample number:  Was the project manager called and status discussed?  Yes	
	Was a sufficient amount of sample sent for tests indicated?  Were bubbles absent in volatile samples?  If NO, list by sample number:  Was the project manager called and status discussed?  Yes  If yes, give details on the back of this form.	No
<b>20</b> . <b>21</b> .	Was a sufficient amount of sample sent for tests indicated?  Were bubbles absent in volatile samples?  If NO, list by sample number:  Was the project manager called and status discussed?  If yes, give details on the back of this form.  Who was called?  By whom?  Date:	No
20. 21.	Was a sufficient amount of sample sent for tests indicated?  Were bubbles absent in volatile samples?  If NO, list by sample number:  Was the project manager called and status discussed?  Yes  If yes, give details on the back of this form.	No



## ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story

2790 Mosside Boulevard

Monroeville, PA 15146 Attn: Tom Mathison April 8, 1994

Job Number: Q403321/322

The Certificate of Analysis is for the following:

Client Project ID:

519029

Date Received by Lab:

03/25/94

Number of Samples:

Thirty-three

Sample Type:

Soil

#### 1.0 Introduction

On March 25, 1994 thirty-three samples were received at ITAS Pittsburgh, labeled as follows:

450D-032494 492F-032494 393A-032494 435C-032494 440C-032494 477E-032494 477E DUP-032494 497F-032494 413B-032494 388A-032494	430C DUP-032494 408B-032494 400B-032494 442D-032494 403B-032494 445D-032494 487F-032494	482E-032494 484F-032494 379A-032494 421C-032494 418B-032494 383A-032494 425C-032494 463E-032494 467E-032494
455D-032494	398A-032494	502F-032494

The analysis for TPH-diesel was performed at our ITAS laboratory in Austin, Texas. these results will follow under separate cover.

2.0 Analytical Results/Methodology

Results are presented in the enclosed tables, and were determined in accordance with Methods 8015 and 9071, <u>Test Methods for Evaluating Solid Waste</u>, EPA SW-846, 3rd ed., 1986; and Method 418.1, <u>Method for the Chemical Analysis of Water and Waste</u>, EPA, 600/4-79-020, 1983 revision.

Reviewed and Approved:

Carrie L. Smith-Gamber, Project Manager

American Council of Independent Laboratories International Association of Environmental Testing Laboratories American Association for Laboratory Accreditation

Date: 04/08/94

Job Number: Q403321/322 Client Project ID: 519029 IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

## 2.0 Analytical Results/Methodology (Continued)

Results of sample concentrations are based on dry weight and expressed in milligrams per kilogram or parts per million. ND denotes that the compound is not detected at or above the indicated detection limit.

#### 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story Date: 04/08/94 Job Number: Q403321/322 Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

## Total Petroleum Hydrocarbons Analysis

Client Sample ID:

See below

Sample Date:

03/24/94

Analysis Date:

03/31/94

Clie	ent Sample ID	Lab Sample ID	Concentration mg/Kg
4	50D-032494	Q40332101	120
4	192F-032494	Q40332102	110
	93A-032494	Q40332103	270
4	35C-032494	Q40332104	310
4	40C-032494	Q40332105	290
4	77E-032494	Q40332106	2,300
477	E DUP-032494	Q40332107	3,200
4	197F-032494	Q40332108	270
4	13B-032494	Q40332109	45
	88A-032494	Q40332110	2,000
. 4	55D-032494	Q40332111	3,500
455]	D DUP-032494	Q40332112	3,100
4	72E-032494	Q40332113	500
4	30C-032494	Q40332114	3,400
4300	C DUP-032494	Q40332115	2,500
	08B-032494	Q40332116	270
*	B-032494 DUP	Q40332117	270
. 4	100B-032494	Q40332201	210
4	42D-032494	Q40332202	580
4	03B-032494	Q40332203	220
4	45D-032494	Q40332204	110
4	187F-032494	Q40332205	490
3	98A-032494	Q40332206	170
	82E-032494	Q40332207	57
	84F-032494	Q40332208	26
3	79A-032494	Q40332209	850
	21C-032494	Q40332210	810
	18B-032494	Q40332211	560
	83A-032494	Q40332212	130
	25C-032494	Q40332213	330
	63E-032494	Q40332214	310
4	67E-032494	Q40332215	330

Date: 04/08/94 Job Number: Q403321/322 Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

Total Petroleum Hydrocarbons Analysis - Continued

Client Sample ID:

See below

Sample Date:

Analysis Date:

03/31/94

Client Sample ID	Lab Sample ID	Concentration mg/Kg
460D-032494	Q40332216	330
502F-032494	Q40332217	360
502F-032494 DUP	Q40332218	390
<b></b>	Method Blank	ND17

Client Sample ID:

See Below

Sample Date:

03/24/94

Analysis Date:

03/31/94

Client Sample ID	Lab Sample ID	Matrix Spike Percent Recovery
408B-032494 MS	Q40332118	80%
502F-032494 MS	Q40332219	53%

Date: 04/08/94

Job Number: Q403321/322 Client Project ID: 519029 IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY EXPORT, PA 15632 (412) 731-8806

## Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below Sample Date: 03/24/94

Analysis Date: 03/30 and 31/94

Client Sample ID	Lab Sample ID	Gasoline µg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
450D-032494	Q40332101	ND7300	78%
492F-032494	Q40332102	ND6300	82%
393A-032494	Q40332103	ND6100	80%
435C-032494	Q40332104	ND6500	81%
440C-032494	Q40332105	ND7200	77%
477E-032494	Q40332106	ND6900	79%
477E DUP-032494	Q40332107	ND6500	79%
497F-032494	Q40332108	ND6500	81%
413B-032494	Q40332109	ND6400	79%
388A-032494	Q40332110	ND6500	80%
455D-032494	Q40332111	ND6600	84%
455D DUP-032494	Q40332112	ND6500	79%
472E-032494	Q40332113	ND6400	82%
430C-032494	Q40332114	ND6500	78%
430C DUP-032494	Q40332115	ND6400	79%
408B-032494	Q40332116	ND6300	79%
400B-032494	Q40332201	ND6400	90%
442D-032494	Q40332202	ND6700	81%
403B-032494	Q40332203	ND6300	81%
445D-032494	Q40332204	ND6700	81%
487F-032494	Q40332205	ND6800	82%
398A-032494	Q40332206	ND6400	89%
482E-032494	Q40332207	ND6900	80%
484F-032494	Q40332208	ND6300	84%
379A-032494	Q40332209	ND6300	86%
421C-032494	Q40332210	ND6500	82%
418B-032494	Q40332211	ND6300	82%
383A-032494	Q40332212	ND6300	81%
425C-032494	Q40332213	ND6500	83%
463E-032494	Q40332214	ND6300	82%
467E-032494	Q40332215	ND6100	79%
460D-032494	Q40332216	ND6400	81%
502F-032494	Q40332217	ND6300	82%
<del></del>	Method Blank 03/30/94	ND6200	82%
	Method Blank 03/31/94	ND6200	66%

IT Corporation/Fort Story Date: 04/08/94

Job Number: Q403321/322 Client Project ID: 519029

IT ANALYTICAL SERVICES 5103 OLD WILLIAM PENN HIGHWAY **EXPORT, PA 15632** (412) 731-8806

## Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below

Sample Date: 03/24/94

Analysis Date: 03/30 and 31/94

Client Sample ID	Lab Sample ID	Gasoline Percent Recovery	Surrogate Percent Recovery
408B-032494	Q40332117/18	88%/89%	57%/60%
502F-032494	Q40332218/19	90%/101%	60%/71%



## ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story 2790 Mosside Boulevard Monroeville, PA 15146

April 12, 1994

Attn: Tom Mathison

Job Number: Q403298/299

The Certificate of Analysis is for the following:

Client Project ID:

519029

Date Received by Lab:

03/24/94

Number of Samples:

Thirty-three

Sample Type:

Soil

#### 1.0 Introduction

On March 24, 1994 thirty-three samples were received at ITAS Pittsburgh, labeled as follows:

294B-032394	349E-032394	273A-032394
336D-032394	280B-032394	315C-032394
378F-032394	322D-032394	357E-032394
255A-032394	322D DUP-032394	332D-032394
297C-032394	364F-032394	374F-032394
339E-032394	275B-032394	260A-032394
290B-032394	270A-032394	302C-032394
290B DUP-032394	312C-032394	344E-032394
369F-032394	354E-032394	285B-032394
265A-032394	317D-032394	285B DUP-032394
307C-032394	359F-032394	327D-032394

#### 2.0 Analytical Results/Methodology

The analysis for Methods 9071/418.1, and 8015-Diesel were performed at our ITAS Laboratory in Austin, Texas. These results are enclosed.

Reviewed and Approved:

Carrie L. Smith-Gamber, Project Manager



## ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/07/94

Work Order: B4-03-273

P.O. Number: E94-036

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY 519029 SDG FS004

314610

Date Received: 03/25/94 Number of Samples: 20 Sample Type: SOIL

I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIFICATION	LABORATORY #
275B-032394	B4-03-273-01
270A-032394	B4-03-273-02
312C-032394	B4-03-273-03
354E-032394	B4-03-273-04
317D-032394	B4-03-273-05
359F-032394	B4-03-273-06
273A-032394	B4-03-273-07
315C-032394	B4-03-273-08
357E-032394	B4-03-273-09
332D-032394	B4-03-273-10
374F-032394	B4-03-273-11

Reviewed and

M/MXH/I

Laboratory Diffector

Page: 14 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES AUSTIN, TX

AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 349E-032394

SAMPLE DATE: 03/23/94 10:10:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	_ Ref	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		210	11	mg/kg	04/02/94	EPA9071
Moisture		4.2		% Moisture	03/29/94	
TPH-D by GC (EPA8015 MOD)	1	130	9	mg/kg	•	EPA8015 MOD

314610

#### Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 87 C32 96

Page: 14 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 260A-032394

SAMPLE DATE: 03/23/94 09:00:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		190	11	mg/kg	04/02/94	EPA9071
Moisture		4.2		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	90	1.7	mg/kg	03/30/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	72
	C32	64

Page: 3 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 275B-032394

SAMPLE DATE: 03/23/94 11:00:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		89	11	mg/kg	04/02/94	EPA9071
Moisture		3.6		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015 MOD)	1	73	1.7	mg/kg	• •	EPA8015 MOD

314610

1	Surrogate	Recovery %
	o-terphenyl	94
	C32	101

Page: 4 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 270A-032394

SAMPLE DATE: 03/23/94 11:20:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	_ Ref _	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		200	10	mg/kg	04/02/94	EPA9071
Moisture		2.0		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	94	1.7	mg/kg	03/30/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	88
	C32	84

Page: 5 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 312C-032394

SAMPLE DATE: 03/23/94 11:40:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		200	11	mg/kg	04/02/94	EPA9071
Moisture		3.9		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	55	1.7	mg/kg	03/30/94	EPA8015_MOD

1	Surrogate	Recovery %
	o-terphenyl	69
	C32	67

Page: 6 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 354B-032394

SAMPLE DATE: 03/23/94 11:50:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		220	11	mg/kg	04/02/94	EPA9071
Moisture		6.7		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	120	1.8	mg/kg	03/30/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	77
	C32	75

Page: 7 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 317D-032394

SAMPLE DATE: 03/23/94 12:00:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	<u>Units</u>	Analyzed	Reference
9071/418.1 for TPH		92	12	mg/kg	04/02/94	EPA9071
Moisture		14		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015 MOD)	1	46	2	mg/kg	03/30/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	107
	C32	100

Page: 8 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 359F-032394

SAMPLE DATE: 03/23/94 12:15:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		320	10	mg/kg	04/02/94	EPA9071
Moisture		0.81		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015 MOD)	1	92	1.7	mg/kg	03/30/94	EPA8015 MOD

314610

1	Surrogate	Recovery %
	o-terphenyl	69
	C32	83

Page: 9 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 273A-032394

SAMPLE DATE: 03/23/94 12:10:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		310	10	mg/kg	04/02/94	EPA9071
Moisture		1.6		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015 MOD)	1	95	1.7	mg/kg	03/30/94	EPA8015 MOD

1	Surrogate	Recovery	¥
	o-terphenyl	81	
	C32	73	

Page: 10 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 315C-032394

SAMPLE DATE: 03/23/94 12:40:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		56	11	mg/kg	04/02/94	EPA9071
Moisture		6.5		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	20	1.8	mg/kg	03/30/94	EPA8015 MOD

314610

1	Surrogate	Recovery %
	o-terphenyl	114
	C32	113

Page: 11 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 357E-032394

SAMPLE DATE: 03/23/94 12:35:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref _	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		59	11	mg/kg	04/02/94	EPA9071
Moisture		6.8		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015 MOD)	1	43	1.8	mg/kg	03/30/94	EPA8015 MOD

314610

1	Surrogate	Recovery %
	o-terphenyl	125
	C32	123

Page: 12 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 332D-032394

SAMPLE DATE: 03/23/94 08:40:00

SAMPLE MATRIX: SOIL

	Note	F	Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		480	11	mg/kg	04/02/94	EPA9071
Moisture		4.1		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015 MOD)	1	300	1.7	mq/kq	03/30/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	111
	C32	96

Page: 13 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 374F-032394

SAMPLE DATE: 03/23/94 09:00:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		32	11	mg/kg	04/02/94	
Moisture		3.5		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	8.1	1.7	mg/kg	03/30/94	EPA8015 MOD

314610

1	Surrogate	Recovery %
	o-terphenyl	97
	C32	100

Page: 15 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

IT ANALYTICAL SERVICES

SAMPLE ID: 302C-032394

SAMPLE DATE: 03/23/94 09:15:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref _	Result	Limit	Units	<u>Analyzed</u>	Reference
9071/418.1 for TPH		360	11	mq/kq	04/02/94	EPA9071
Moisture		3.6		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	140	1.7	mg/kg	03/30/94	EPA8015 MOD

314610

1	Surrogate	Recovery	8
	o-terphenyl	76	
	C32	70	

Page: 16 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES
AUSTIN TX

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 344E-032394

SAMPLE DATE: 03/23/94 09:15:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		260	11	mg/kg	04/02/94	EPA9071
Moisture		3.2		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015 MOD)	1	280	1.7	mg/kg	03/30/94	EPA8015 MOD

314610

### Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 105 C32 85

Page: 17 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 285B-032394

SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

	Note .		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		120	10	mg/kg	04/02/94	EPA9071
Moisture		2.2		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015 MOD)	1	140	1.7	mg/kg		EPA8015 MOD

314610

1	Surrogate	Recovery	ક્ર
	o-terphenyl	84	
	C32	 72	

Page: 18 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 285BDUP-032394

SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	<u>Limit</u>	Units	Analyzed	Reference
9071/418.1 for TPH		88	10	mg/kg	04/02/94	EPA9071
Moisture		2.7		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	83	1.7	mg/kg	•	EPA8015 MOD

## Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 102 C32 91

Page: 19 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 327D-032394

SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		610	11	mg/kg	04/02/94	EPA9071
Moisture		3.9		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	290	1.7	mg/kg	03/30/94	EPA8015 MOD

#### Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	95
	C32	78

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Page: 20 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 327D-032394 MATRIX SPIKE

SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Uni	ts Analyzed	Reference
9071/418.1 for TPH		66	% R	ec 04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	720	% R	ec 03/30/94	EPA8015 MOD

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#### Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 46 C32 \*

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<sup>\*</sup> Surrogate not reported due to matrix interference.

Page: 21 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 327D-032394 MSD SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit Un	its	<u>Analyzed</u>	Reference
9071/418.1 for TPH		63	8	Rec	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	830	ક્ર	Rec	03/30/94	EPA8015_MOD

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 $= \frac{1}{2\pi} \sum_{i \in \mathcal{I}_{i}} \left( \operatorname{det}(i, \mathbf{x}_{i}) + \operatorname{det}(i, \mathbf{x}_{i}) \right) = 0 \quad \text{for } i \in [0, 1]$ 

and produce the second of the

## Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 53 C32 48

Page: 22 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

SAMPLE ID: METHOD BLANK

SAMPLE DATE:

SAMPLE MATRIX: SOIL

	Note	Reporting			Date	Method
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		ND	10	mg/kg	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	ND	2	mg/kg	03/30/94	EPA8015_MOD

1	Surrogate	Recovery %
	o-terphenyl	78
	C32	97

Page: 23 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

#### Referenced notes for this work order:

B403273

The chromatograms generally contained a pattern from C14 to C44, although integration occurred from C9 to C24 (diesel range).

Page: 24 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-03-273

#### IV. Methodology

Requested analyses were performed according to the following methods.

#### TEST NAME 9071/418.1 for TPH

#### TEST CODE 9071IR

9071 Prep and IR Analysis

Method 9071, SW846, Test Methods for Evaluating Solid Waste, Third Edition. Soxhlet extraction from Method 9071 using freon and infrared analysis of the extract using Method 418.1.

#### TEST NAME Moisture

#### TEST CODE MOIST

Moisture

Standard Method 209F/2540G or EPA CLP. Percent moisture obtained by drying of soil or sludge sample at 103-105 degrees centigrade. Moisture content is 100% - %Total Solids.

### TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH GC

TPH-Extractable
Petroleum
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.

INTERNATIONAL TECHNOLOGY
CORPORATION

## ARIAI VOIC DECLIECT ARID

8403273		
Reference Document No.	434	Hil

TECHNOLO								UST			CORD	*	Pag	je 1 of	2	•	140. *; () *;	<u> </u>
Project Name/	No.	1 Furt	Sory SI	902	g Samı	oles S	hipm	ent Da	te	73/24	194		Bill t	0.5 FM	5 Pet	1		
Sample Team Members 2 Per narco / Bernarolo Lab Destination 8 TABS AUSTIN																		
Profit Center No. 3 46/0 Lab Contact									ct	9 Ch	us Al	chy	Cuff					
Profit Center No. 3 4610  Project Manager 4 Carrie Smith C Project Contact/Phone 12412-731-886  Purchase Order No. 6 694-036  Carrier/Waybill No. 13 Fed X342 305045  Carrier/Waybill No. 13 Fed X342 305045																		
Purchase Order No. 6 694-036 Carrier/Waybill No. 13 Fed X3423805045 Heport to:																		
Required Report Date 11 4-6-94  ONE CONTAINER PER LINE																		
Sample <sup>14</sup> Number		Sar Descript	mple <sup>15</sup> ion/Type	Da Co	te/Time <sup>16</sup> ollected	Conta Typ	iner <sup>17</sup>		<b>1</b> 8	Pre- servativ	19 <b>Re</b>	Prog	d Testing <sup>20</sup> gram	F	idition oi leceipt		Disposa Record N	ıl <sup>22</sup> Jo.
275B - 03,2394				3-23	94	AMP		17050r	2	ice	TPH V	118EL 9071	1418,1	600	1/°C	74		
270A-032394			02		1120								:		HO	RL	AB.	
312C-032394			03		1140											E W	WL.Y	
354E-032394			04		1150								** **					
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315C-032 <b>3</b> 94		/ \/	08	Ų	טיבו ז	٠ ﴿	$\downarrow$	<u> </u>	<u>/</u>	1	<u> </u>	Y			/	· · · · · · · · · · · · · · · · · · ·		
Special Instruction	ns:	23 /Ye	Hom	a	C on	1	32	70-	0	323	94	\$ •	5DG-	FSØ)	d4			
Possible Hazard Non-hazard 🖄 F				tant	l Poi	son B		Unkno	own		Sampl Return	e Dis <sub>l</sub> to Clie	oosal: <sup>25</sup> nt <b>1</b> Disp	osal by L	ab	Archive	)[	(mos.)
Turnaround Time	Turnaround Time Required: <sup>26</sup> Normal Rush Project Specific (specify);																	
1. Relinquished by 28 Robert to Lay 747 Time: 1760									1. Red (Signature	eived by /Affiliation)	28	i Ch	nel	Ir	Date: Time:	3-25.94 0852		
2. Relinquished by (Signature/Affiliation)			0		Dat Tim					2. Red (Signature	eived by /Affiliation)					Date:_ Time:		
3. Relinquished by (Signature/Affiliation)					Dat Tim						eived by /Affiliation)					Date: Time:		
Comments: 29			<u> </u>		<del>,, -, -,,</del>													

INTERNATIONAL TECHNOLOGY CORPORATION

Project Name FORT STORY

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

8403273
Reference Document No.30 484101
Page 2 of 2

Project No. 519029

Samples Shipment Date 3/24/94

ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sar Descript	nple <sup>15</sup> ion/Type		te/Time <sup>16</sup> ollected		ainer <sup>17</sup> pe	Volume	servative	Requested Testing <sup>20</sup> Program	Condition on 21 Receipt	Disposal 22 Record No.
TE-032394	Scil Q3	14299-09	3-2	3-14 1235	27	358	MUSON IX GONL	ice	Program  TPH VIESEL 8015/3558  TPHC 9971 4181	Good 1°C 91	
320-03+394		10		8:40					,		
4F-032394		(1		900							
OA-032394		12		900							
IC-032394		13		9:15							
16-032394		14		9:15							and Andrew Maria
B- 032344		15	$\prod$	9:20							
58 DUP -032394	,	16		9:20							
70-032394	V	17 18 ms	P	9:20		$\sqrt{V}$		1	Y	<i>V</i>	
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		-								Marin Admin St. Congr. Marin Co.	BF 3/24/99
			-	- Mr				<del></del>			1/1 /10/(1/

## **Cooler Receipt Form**

D==:=	ct:								
Projec									
Use o	ther side of this form to note details concerning check-in problems.								
A.	Preliminary Examination Phase:								
	Date cooler opened: 3-25-94 C-of-C No.: 4 8410								
	Date cooler opened: 3-25-94 C-of-C No.: 484101  By (print) Lorn: Church (sign) Low Church	-							
1.	Did cooler come with a shipping slip (air bill, etc.)?	Yes	No						
	If YES, enter carrier name & air bill no. here: Fed x 2423805 045								
2.	Were custody seals on outside of cooler?	(Yes)	No						
	How many & where:								
	Seal date: Seal name:								
3.	Were custody seals unbroken and intact at the date and time of arrival:	Yes	No						
4.	Did you screen samples for radioactivity using the Geiger Counter:	Yes	(No.						
5.	Were custody papers sealed in a plastic bag and taped inside of the lid?		No						
6.	Were custody papers filled out properly (ink, signed, etc.)?		No						
7.	Did you sign custody papers in the appropriate place?								
8.	Was project identifiable from custody papers?								
	If YES, enter project name at the top of this form.								
9.	If required, was enough ice used?	Yes	No						
	Type of ice: $\omega e^{\dagger}$								
10.	Have designated person initial here to acknowledge receipt of cooler: 2xC Date:	3.25	. 94						
В.	Log-in Phase:								
	Date samples were logged-in: 3-25-94 By (print) Lorri Church (sign) Land	12	J						
11.	Describe type of packing in cooler:	<u>u vu</u>							
12.	Warre all be when a set of the second of the	Yes	NI-						
13.	Did all bottles arrive unbroken & were labels in good condition?	$\sim$	No						
14.	Were all bottle labels complete (ID, date, time, signature, preservative, etc.)?	(Yes)	No						
15.	- ,		No						
16.	Did all bottle labels agree with custody papers?								
17.	Were correct containers used for the test indicated?								
17. 18.	Were correct preservatives added to samples?	Yes	No						
	Was a sufficient amount of sample sent for tests indicated?	Yes	No						
19.	Were bubbles absent in volatile samples?	Yes	No						
20	If NO, list by sample number:								
20.	Was the project manager called and status discussed?	Yes	(No)						
01	If yes, give details on the back of this form.								
21.	Who was called? By whom? Date:								



# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/07/94

Work Order: B4-03-275

P.O. Number: E94-036

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY 519029 SDG FS004

314610

Date Received: 03/25/94 Number of Samples: 19 Sample Type: SOIL

I. Introduction

Samples were labeled as follows:

LABORATORY #
B4-03-275-01
B4-03-275-02
B4-03-275-03
B4-03-275-04
B4-03-275-05
B4-03-275-06
B4-03-275-07
B4-03-275-08
B4-03-275-09
B4-03-275-10
B4-03-275-11

Reviewed and Approved:

Jon Bartell

Laboratory Director

Page: 2 of 24

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

314610

Work Order: B4-03-273

#### Samples, continued from above:

SAMPLE IDENTI	FICATION	LABORATORY #
302C-032394		B4-03-273-13
344E-032394		B4-03-273-14
285B-032394		B4-03-273-15
285BDUP-03239	4	B4-03-273-16
327D-032394		B4-03-273-17
327D-032394	MATRIX SPI	KE B4-03-273-18
327D-032394	MSD	B4-03-273-19
METHOD BLANK		B4-03-273-20

#### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 2 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684 Work Order: B4-03-275

## Samples, continued from above:

SAMPLE IDENTI	LABORATORY #	
280B-032394		B4-03-275-13
322D-032394		B4-03-275-14
322DDUP-03239	4	B4-03-275-15
364F-032394		B4-03-275-16
364F-032394	MATRIX SPIKE	B4-03-275-17
364F-032394	MSD	B4-03-275-18
METHOD BLANK		B4-03-275-19

#### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 294B-032394

SAMPLE DATE: 03/23/94 07:15:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		2000	250	mg/kg	04/02/94	
Moisture		2.3		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	930	34	mg/kg	04/01/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	81
	C32	94

Page: 4 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 336D-032394

SAMPLE DATE: 03/23/94 07:15:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	<u>Limit</u>	Units	Analyzed	Reference
9071/418.1 for TPH		900	53	mg/kg	04/02/94	
Moisture		3.3		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	480	9	mg/kg	04/01/94	EPA8015 MOD

314610

## Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 90 C32 89

Page: 5 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 378F-032394

SAMPLE DATE: 03/23/94 07:40:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		620	11	mg/kg	04/02/94	
Moisture		3.7		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	350	9	mg/kg	04/01/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	87
	C32	87

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Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 255A-032394

SAMPLE DATE: 03/23/94 07:40:00

SAMPLE MATRIX: SOIL

Test Name	Note	D14	Reporting		Date	Method
	<u>Ref</u>	Result	Limit	Units	<u>Analyzed</u>	Reference
9071/418.1 for TPH		740	53	mg/kg	04/02/94	EPA9071
Moisture		3.4		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	54	2	mg/kg	04/01/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	106
	C32	108

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Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 297C-032394

SAMPLE DATE: 03/23/94 08:00:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		400	11	mg/kg	04/02/94	
Moisture		3.4		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	250	2	mg/kg		EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	74
	C32	62

Page: 8 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 339E-032394

SAMPLE DATE: 03/23/94 08:15:00

SAMPLE MATRIX: SOIL

Mont Warra	Note		Reporting		Date	Method
Test Name	<u> Ref</u> _	<u>Result</u>	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		650	11	mq/kq	04/02/94	
Moisture		6.3		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	440	4	mg/kg	•	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	83
	C32	67

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Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 290B-032394

SAMPLE DATE: 03/23/94 08:30:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		450	11	mg/kg	04/02/94	
Moisture		3.7		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	210	4	mg/kg	04/01/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	74
	C32	71

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Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 290BDUP-032394

SAMPLE DATE: 03/23/94 08:30:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	<u>Units</u>	Analyzed	Reference
9071/418.1 for TPH		250	11	mg/kg	04/02/94	
Moisture		3.2		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	130	2	mg/kg		EPA8015 MOD

314610

## Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 69 C32 70

Page: 11 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 369F-032394

SAMPLE DATE: 03/23/94 09:40:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		480	10	mg/kg	04/02/94	
Moisture		2.2		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	190	3	mg/kg	•	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	77
	C32	108

Page: 12 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 265A-032394

SAMPLE DATE: 03/23/94 09:40:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		280	11	mg/kg	04/02/94	
Moisture		2.6		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	170	2	mg/kg		EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	88
	C32	85

Page: 13 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 307C-032394

SAMPLE DATE: 03/23/94 10:10:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		2500	140	mg/kg	04/02/94	
Moisture		8.1		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	730	9	mg/kg	04/01/94	EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	64
	C32	93

Page: 15 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 280B-032394

SAMPLE DATE: 03/23/94 10:20:00

SAMPLE MATRIX: SOIL

Tost Name	Note		Reporting		Date	Method
Test Name	<u> Ref</u> _	<u>Result</u>	<u>Limit</u>	Units	Analyzed	Reference
9071/418.1 for TPH		250	11	mg/kg	04/02/94	
Moisture		3.6		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	130	9	mg/kg		EPA8015 MOD

1	Surrogate	Recovery %
	o-terphenyl	88
	C32	93

Page: 16 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 322D-032394

SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
9071/418.1 for TPH		4800		mg/kg	04/02/94	
Moisture	_	11		% Moisture	03/29/94	
TPH-D by GC (EPA8015_MOD)	1	1300	9	mg/kg	04/01/94	EPA8015 MOD

## Referenced notes for these results:

Surrogate o-terphenyl C32

Recovery %

\*

\* Surrogate diluted out.

Page: 17 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 322DDUP-032394

SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref _	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		7500	130	mg/kg	04/02/94	
Moisture		5.7		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	2300	18	mg/kg	, ,	EPA8015 MOD

### Referenced notes for these results:

1 Surrogate o-terphenyl

Recovery % 64

04

\* Surrogate diluted out.

Page: 18 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 364F-032394

SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	<u>Limit</u>	Units	Analyzed	Reference
9071/418.1 for TPH		720	53	mg/kg	04/02/94	EPA9071
Moisture		4.5		% Moisture	03/29/94	209 F
TPH-D by GC (EPA8015_MOD)	1	280	9	mg/kg	04/01/94	EPA8015 MOD

## Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 83 C32 75

Page: 19 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

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IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684 Work Order: B4-03-275

SAMPLE ID: 364F-032394 MATRIX SPIKE

SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed Reference
9071/418.1 for TPH		59	% Rec	04/02/94 EPA9071
TPH-D by GC (EPA8015_MOD)	1	310	% Rec	04/01/94 EPA8015_MOD

### Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 100 C32 90

Page: 20 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 364F-032394 MSD SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

	Note	1	Reporting	Date	Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit Units	Analyzed	Reference
9071/418.1 for TPH		74	% Rec	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	240	% Rec	04/01/94	EPA8015 MOD

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## Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 81 C32 77

Page: 21 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684 Work Order: B4-03-275

SAMPLE ID: METHOD BLANK

SAMPLE DATE:

SAMPLE MATRIX: SOIL

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
9071/418.1 for TPH		ND	10	mg/kg	04/02/94	
TPH-D by GC (EPA8015_MOD)	1	ND	2	mg/kg	04/01/94	EPA8015 MOD

1 Surrogate	Recovery %
- o-terphenyl	83
C32	89

Page: 22 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684 Work Order: B4-03-275

#### Referenced notes for this work order:

B403275

The chromatograms generally contained a pattern from C14 to C44, although integration occurred from C9 to C24 (diesel range).

Page: 23 of 23

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-03-275

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME 9071/418.1 for TPH

TEST CODE 9071IR

9071 Prep and IR Analysis

Method 9071, SW846, Test Methods for Evaluating Solid Waste, Third Edition. Soxhlet extraction from Method 9071 using freon and infrared analysis of the extract using Method 418.1.

TEST NAME Moisture

TEST CODE MOIST

Moisture

Standard Method 209F/2540G or EPA CLP. Percent moisture obtained by drying of soil or sludge sample at 103-105 degrees centigrade. Moisture content is 100% - %Total Solids.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH GC

TPH-Extractable
Petroleum
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.

INTERNATIONAL TECHNOLOGY CORPORATION

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

8403275		
	_	_

Reference Document No. 484100Page 1 of 2

CORPORA	_	, 011	7114 OI (		D! AL		C 1 01 <u>CC</u>	
Project Name/	No. 1 FORT S	ORY/59009 Sam	ples Shipm	ent Date	73/24	/24 Bill to	5 ITHS PITT	
Sample Team Memb	oers 2 DeMarco	/Bernardo			8 HAS		· · · · · · · · · · · · · · · · · · ·	
Profit Center	No. 3 4610		Lat	Contact	9 Chi	is Achip coff		
Project Mana	ager 4 Carrie S	Smith & Pro	ject Contac	t/Phone	12 4/2-	731-8896 ()	10 ISTAS Pitt	
Purchase Order	No. 6 E94-0	36	Carrier/W	/aybill No	13FED2	(24)3805036 Report to		
Required Report C	Date 11 4/6/	94	ONE	CONT	AINER	PER LINE		
Sample <sup>14</sup> Number	Sample <sup>1</sup> Description/Ty	pe Collected	Container <sup>1</sup> Type	Sample 18	_	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
294B - 032394	9403398-01 501C	3-23-94	AMBER GLASS	1x250mg	KE	TPH DIESEL 8015/359	Good 1°5	
336D-03239Y	0403298-02	7:15					FUR L	AB,
378F-032394	03	7:40					uae u	ARY
255A-032394	04	7:40	;		\			
297C-032394	OS	8:00						
339E-03239Y	06	8:15						
2908-032394	07	8:30						
290B OOF -03239	W V 08	8:30		V	V	$\bigvee$	V	
Special Instructio	ns: <sup>23</sup> Perfe	orm OC on	364F	-0323	94	SDG FS	5003	
Possible Hazard I Non-hazard D	dentification: <sup>2</sup>		ison B 🛄	Unknow	n 🔟	Sample Disposal: <sup>25</sup> Return to Client  Dispo	sal by Lab Archive	e (mos.)
Turnaround Time	Required: <sup>26</sup>		QQ I.I.	C Level: 2	7	Project Specific (specify):		
1. Refinquished by (Signature/Affiliation)	28 Robert 76	May Fit Tin		194	1. Recei	ived by 28//	Date:	3-25-94
2. Relinquished by (Signature/Affiliation)		Da Tin		· .·	2. Recei (Signature/A	ved by ffiliation)	Date: Time:	
3. Relinquished by (Signature/Affiliation)		Da Tin			3. Recei		Date: Time:	
Comments: 29					1			
					* %			

8403275



## **ANALYSIS REQUEST AND** CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.30 484100 Page 2 of 2

Project No. 519029

Page of 3

ONE CONTAINED DED LINE

Sample 14 Number	Descri	ample 15 ption/Type	Dat Co	e/Time <sup>16</sup> llected	Cont Ty		Volu	me		re-19 ative		ested Testing <sup>20</sup> Program	Condition on 21 Receipt	Disposal 22 Record No.
369F-03239Y	94032	8-189	3-2	3-94 9:40	Ami	res 155	1425	nd nd	1Ct	<u>e</u>	TPHC	82 8015/355 9071/41811	Good 18	
265A-032394	Q403.298			9:40									\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
307C-03239Y		11		10:16									056	
349E-032394		12		10:10						_	· .		Shirt and the state of the stat	
280 B-032399		13	Ш	10:20										
3220-032394		14		10:30										est li Vil Bee W
322D WP-03239	4	15		101,30										
364F-032394	VV	15 ASDIDU 18 MS	4 1	10:30		1	V		\	(		V	4	
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														_
														BF 74/94

## Cooler Receipt Form

Proje	ct:							
Use o	other side of this form to note details concerning check-in problems.							
A.	Preliminary Examination Phase:							
	Date cooler opened: 3-25-94 C-of-C No: 484/00							
	Date cooler opened: 3-25-94 C-of-C No.: 484/00  By (print) Church (sign) Kon: Church							
1.	Did cooler come with a shipping slip (air bill, etc.)?							
	If YES, enter carrier name & air bill no. here: _ Felx 2423805036							
2.	Were custody seals on outside of cooler?							
	How many & where:/							
	Seal date: Seal name:							
3.	Were custody seals unbroken and intact at the date and time of arrival:							
4.	Did you screen samples for radioactivity using the Geiger Counter:							
5.	Were custody papers sealed in a plastic bag and taped inside of the lid?							
6.	Were custody papers filled out properly (ink, signed, etc.)?							
7.	Did you sign custody papers in the appropriate place?							
8.	Was project identifiable from custody papers? Yes No							
	If YES, enter project name at the top of this form.							
9.	If required, was enough ice used?  No							
	Type of ice.							
10.	Have designated person initial here to acknowledge receipt of cooler: XXC Date: 3-25-94							
<b>D</b>	Los in Discour							
В.	Log-in Phase:							
4.4	Date samples were logged-in: 3-25-94  By (print) Lorr; Church (sign) Louisland							
11.	Describe type of packing in cooler: Vermiculité							
12.	Were all bottles sealed in separate plastic bags?							
13.	Did all bottles arrive unbroken & were labels in good condition?							
14.	Were all bottle labels complete (ID, date, time, signature, preservative, etc.)?							
15.	Did all bottle labels agree with custody papers?							
16.	Were correct containers used for the test indicated?							
17.	Were correct preservatives added to samples?							
18.	Was a sufficient amount of sample sent for tests indicated?							
19.	Were bubbles absent in volatile samples?							
00	If NO, list by sample number:							
20.	Was the project manager called and status discussed?							
91	If yes, give details on the back of this form.							
21.	Who was called? By whom? Date:							



# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story 2790 Mosside Boulevard

2790 Mosside Boulevard Monroeville, PA 15146

Attn: Tom Mathison

April 15, 1994

Job Number: Q403344/345 Revised

The Certificate of Analysis is for the following:

Client Project ID:

519029

Date Received by Lab:

03/29 and 30/94

Number of Samples:

Thirty-four

Sample Type:

Soil

1.0 Introduction

On March 29 and 30, 1994 thirty-four samples were received at ITAS Pittsburgh, labeled as follows:

616F-32894	611F-32894	621F-32894
574D-32894	609E-32894	579D-32894
522A-32894	525A-32894	537B-32894
527B-32894	542B-32894	537B DUP-32894
606E-32894	584D-32894	601E-32894
564C-32894	569D-32894	559C-32894
532B-32894	569D DUP-32894	517A-32894
532B DUP-32894	554C-32894	
567C-32894	512A-32894	

The analysis for TPH-diesel was performed at our ITAS laboratory in Austin, Texas. These results are enclosed.

Reviewed and Approved:

Carrie L. Smith-Gamber, Project Manager



# ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/14/94

Work Order: B4-03-318

P.O. Number: E94-037

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY 519029 SDG FS007

314610

Date Received: 03/30/94 Number of Samples: 19 Sample Type: SOIL

#### I. Introduction

Samples were labeled as follows:

SAMPLE IDENTI	FICATION	<u>1</u>	LABORATORY #
616F-32894			B4-03-318-01
616F-32894	MATRIX	SPIKE	B4-03-318-02
616F-32894	MSD		B4-03-318-03
574D-32894			B4-03-318-04
522A-32894			B4-03-318-05
527B-32894			B4-03-318-06
606E-32894			B4-03-318-07
564C-32894			B4-03-318-08
532B-32894			B4-03-318-09
532BDUP-32894	•		B4-03-318-10
567C-32894			B4-03-318-11
611F-32894			B4-03-318-12
609E-32894			B4-03-318-13

Reviewed and Approved:

Jon Bartell

Laboratory Director

\_ Page: 2 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

Samples, continued from above:

SAMPLE IDENTIFICATION	LABORATORY #
525A-32894	B4-03-318-14
542B-32894	B4-03-318-15
584D-32894	B4-03-318-16
569D-32894	B4-03-318-17
569DDUP-32894	B4-03-318-18
METHOD BLANK	B4-03-318-19

#### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

\_ Page: 3 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 616F-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units_	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	46	2.0 mg/kg	04/06/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate o-terphenyl

Recovery %

85

C32

\*

<sup>\*</sup> Surrogate diluted out.

\_ Page: 4 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 616F-32894 MATRIX SPIKE

SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015_MOD)	1	95	% Rec	04/06/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate o-terphenyl Recovery %

95

C32

120

\_ Page: 5 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 616F-32894

MSD

SAMPLE DATE: 03/28/94
SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	89	% Rec	04/06/94 EPA8015 MOD

# Referenced notes for these results:

Surrogate
o-terphenyl

Recovery %

68

C32

\*

<sup>\*</sup> Surrogate diluted out.

\_ Page: 6 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 574D-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	ND	2.0 mg/kg	04/06/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 73 C32 96

\_ Page: 7 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 522A-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	320	9.6 mg/kg	04/07/94 EPA8015_MOD

### Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	56
	C32	57

\_ Page: 8 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 527B-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date <b>Method</b>
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	160	2.0 mg/kg	04/06/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 56 C32 65

\_ Page: 9 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 606E-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	410	19 mg/kg	04/07/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 56 C32 69

\_ Page: 10 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610 Work Order: B4-03-318

SAMPLE ID: 564C-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	45	1.9 mg/kg	04/06/94 EPA8015 MOD

### Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	61
	C32	65

\_ Page: 11 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610 Work Order: B4-03-318

SAMPLE ID: 532B-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015 MOD)	1	180	1.8 mg/kg	04/06/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 61 C32 75

\_ Page: 12 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 532BDUP-32894
SAMPLE DATE: 03/28/94
SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	140	1.8 mg/kg	04/06/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 51 C32 \*

<sup>\*</sup> Surrogate not reported due to matrix interference.

\_ Page: 13 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 567C-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	27	1.9 mg/kg	04/06/94	EPA8015_MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 107 C32 75

\_ Page: 14 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 611F-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date 1	Method
Test Name	Ref	Result	Limit Units	Analyzed l	Reference
TPH-D by GC (EPA8015_MOD)	1	4.1	2.0 mg/kg	04/06/94 1	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 47 C32 61

\_ Page: 15 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 609E-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015 MOD)	1	17	2.0 mg/kg	04/06/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 72 77

\_ Page: 16 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 525A-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note	1	Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	10	2.0 mg/kg	04/11/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 77 C32 77

\_ Page: 17 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 542B-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	230	1.8 mg/kg	04/06/94 EPA8015_MOD

### Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 60 C32 \*

<sup>\*</sup> Surrogate not reported due to matrix interference.

\_ Page: 18 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 584D-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	440	19 mg/kg	04/07/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 45 C32 47

\_ Page: 19 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 569D-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	_ <u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	190	2.0 mg/kg	04/06/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 78 C32 86

\_ Page: 20 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: 569DDUP-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Unit	s Analyzed	Reference
TPH-D by GC (EPA8015 MOD)	1	150	1.9 mg/k	g 04/07/94	EPA8015 MOD

### Referenced notes for these results:

1	Surrogate		Recovery	B
	o-terphenyl	-	52	
	C32		58	

\_ Page: 21 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610 Work Order: B4-03-318

SAMPLE ID: METEOD BLANK SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note	Reporting		Date Method
Test Name	Ref	<u>Result</u>	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	ND	2.0 mg/kg	04/07/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 68 C32 77

\_ Page: 22 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007

314610

Work Order: B4-03-318

# Referenced notes for this work order:

B403318

The chromatograms generally contained a pattern from C14 to C44, although integration occurred from C9 to C24 (diesel range).

\_ Page: 23 of 23

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610

Work Order: B4-03-318

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable -

EPA Methods 3510/3520/3550/3580 for extraction of Petroleum samples and modified EPA Method 8015 for GC/FID Hydrocarbons analysis of extracts run against a diesel standard.



ANALYSIS RE EST AND CHAIN OF CUSTODY RECORD.\*

105518	
Reference Document No	484103
Page 1 of <u>2</u>	

MCA 3/15/91

CORPORA'	TION	CHA	AIN OF (	CUSTO	DY RE	CORD*	Pag	ge 1 of <u>~</u>	•
Project Name/	No. 1 FORT STORY SI	9029 Sam	ples Shipm	nent Date	7.3/25	194 3/2	29/94 Bill t	0:5 ETAS PITT	
Sample Team Memb	_		Lab Do	estination	8 IFAS	AUSTIN	)	J	
Profit Center			Lal	b Contact	oC. Sch	epcoff			<u>-</u>
Project Mana	ager 4 C. Smith	Proj					<del></del>	10 THAS POTT	
Purchase Order	No. 6 E94-037		Carrier/W	/aybill No	13 FEDX	2423705	F483 Report to	10 ITAS PITT	
Required Report D	Pate 114/1/99					PER L			9
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16				Reque	ested Testing <sup>20</sup>	Condition on <sup>21</sup>	Disposal <sup>22</sup>
146 00001	Soil 0403344-137	3-28-94	Amedia	246ml			Program DIESEC	Receipt Coop 4°C	Record No.
5740-32894	- 02	1230				* \$		3/309430	AB
522A - 32894	-03	1246				,		USE O	IVLY
527B-32894	- 04	1250				į.			
606E-32894	-05	1340						ton	
564C - 32894	- 06	1:60						LIGE O	KIV .
5328-32894	-07	1:10				1			ČC C
532B OUP-32894	V - 08	1120	1	4	X	*		7	ÖX 9
Special Instruction		MRE	616F-	- 328	74	* . * i	SDG	FSØ07	
Possible Hazard I Non-hazard 🏿 Fi	dentification: 24 ´ ammable 🖳 Skin Irrit	ant 🗐 Poi	son B 🖳	Unknowr			Disposal: <sup>25</sup>	seal by Lab XII. Anabiy	d ( , , , )
Turnaround Time Required: 26  QC Level: 27  Normal XI Rush III III III III III III III III III I									
1. Relinquished by 28 Date: 3/27/99 Time: 1700 Signature/Affiliation)  1. Received by 28 Signature/Affiliation)  1. Received by 28 Signature/Affiliation)  1. Received by 28 Signature/Affiliation)						3/30/9/			
2. Relinquished by Date: Time:				D. Descind by					
3. Relinquished by Date: (Signature/Affiliation) Time:					3. Recei	ved by ffiliation)		Date: Time:	
Comments: 29 Client is aware that samples bottles have 32594 on them and they should be 32894									

ERNATIONAL 1 CHNOLOGY
CORPORATION

Project Name FOR

# **ANALYSIS RECJEST AND** CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.34/03
Page 2 of 2
Samples Shipment Date 3/29/94

ONE CONTAINER PER LINE														
Sample 14 Number	De	Sample 15 escription/Type	Da C	ite/Time <sup>16</sup> ollected	Cont	ype   Volume   s			re-19 ative	Reques Pr	ted Testing 20 ogram	Condition on 21 Receipt	Disposal 22 Record No.	
567 C- 32894	Soil	0403344-09	3-	ollected 19-94   1:70	PM	#SS	24	cho	-		TPH	DIESEC	Coop 4°C	: "
611F-32894		10		1:45								,	3/3094 76	LAE
609E-32894				2:00									USE	ONLY
525A-32894		12		2:10								1		
542B-32899		13		2:00										
584D-32894		19		2:10										
569D - 3279Y 569D DUP -3289Y		15	L	2120										
%90 DUP -37894	$\bigvee$	16		1 2820	<u> </u>	1	\	/	\	$\sqrt{}$		V		
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		V												
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													=03	
		31											BF2	129194
							<u>-</u>						971 /	1041

Cooler Receipt Form

Proje	ct:TORT STORY /Expor LIMS No						
Use o	other side of this form to note details concerning check-in problems.						
A.	Preliminary Examination Phase:  Date cooler opened: 3/30/94  By (print) Buce C. CAVE (sign)  Cost 3/30/94  Cof-C No.: 484/23 / 484/03						
1.	Did cooler come with a shipping slip (air bill, etc.)?  If YES, enter carrier name & air bill no. here:						
2.	Were custody seals on outside of cooler?						
	How many & where: OUER TAPE ON PRONTSCAL LOVER OFFICIAL PEAR						
	Seal date: NONE Seal name: NONE						
3.	Were custody seals unbroken and intact at the date and time of arrival:						
4.	Did you screen samples for radioactivity using the Geiger Counter: Yes No						
5.	Were custody papers sealed in a plastic bag and taped inside of the lid?						
6.	Were custody papers filled out properly (ink, signed, etc.)? Yes No						
7.	Did you sign custody papers in the appropriate place? Yes No						
8.	Was project identifiable from custody papers? No						
	If YES, enter project name at the top of this form.						
9.	If required, was enough ice used?  Type of ice:  WET ICE  No						
10.	Have designated person initial here to acknowledge receipt of cooler: Date:						
<b>B.</b>	Log-in Phase:  Date samples were logged-in: 3/30/94 By (print) HRIS CHEROM(sign) Im Admired  Describe type of packing in cooler: WET KITH UTTEL - REAL MESSA						
12.	Ware all bettles could in consent all said 1						
13.	Did all bottles arrive unbroken 8 were labele in an 1						
14.	Were all hottle labels complete (ID) data time alimentum and a label labels complete (ID) data time alimentum and a lab						
15.	Did all bottle labels agree with custody papers?						
16.	Warn correct containers used for the test in it.						
17.	Were correct presentatives added to complete						
18.	Was a sufficient amount of sample sent for tests indicated?						
19.	Were hubbles absent in volatile complete						
	If NO, list by sample number:						
20.	Was the project manager called and status discussed?						
21.	If yes, give details on the back of this form.  Who was called?   ARRIE SMITH By whom?   C. SCHEROVE Date: 3/30/14						



# ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/14/94

Work Order: B4-03-322

P.O. Number: E94-037

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY 519029 SDG FS008

314610

Date Received: 03/30/94 Number of Samples: 12 Sample Type: SOIL

### I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIE	FICATION	1	LABORATORY #
554C-32894			B4-03-322-01
512A-32894			B4-03-322-02
621F-32894			B4-03-322-03
579D-32894			B4-03-322-04
537B-32894			B4-03-322-05
537BDUP-32894			B4-03-322-06
601E-32894			B4-03-322-07
559C-32894			B4-03-322-08
517A-32894			B4-03-322-09
517A-32894	MATRIX	SPIKE	B4-03-322-10
517A-32894	MSD		B4-03-322-11
METHOD BLANK			B4-03-322-12

Reviewed and Approved:

Jon Bartell

Laboratory Director

\_ Page: 2 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

\_ Page: 3 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 554C-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015 MOD)	1	1200	19 mg/kg	04/07/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 101 C32 126

\_ Page: 4 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 512A-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	99	2.0 mg/kg	04/07/94 EPA8015 MOD

# Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	53
	C32	53

\_ Page: 5 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 621F-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note	Reporting		Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	35	1.9 mg/kg	04/07/94 EPA8015 MOD

# Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	57
	C32	60

\_ Page: 6 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 579D-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	1500	92 mg/kg	04/07/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 90 C32 127

\_ Page: 7 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 537B-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting		Date Me	ethod
Test Name	Ref	Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u> Re	eference
TPH-D by GC (EPA8015_MOD)	1	52	1.7	mg/kg	04/07/94 E	PA8015_MOD

# Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	56
	C32	52

\_Page: 8 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 537BDUP-32894
SAMPLE DATE: 03/28/94
SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015 MOD)	1	57	1.7 mg/kg	04/07/94	EPA8015 MOD

# Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	67
	C32	60

\_ Page: 9 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 601E-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	3100	180 mg/kg	04/07/94 EPA8015_MOD

### Referenced notes for these results:

1 Surrogate

Recovery %

o-terphenyl C32

\* Surrogate diluted out.

\_ Page: 10 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 559C-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method	
Test Name	Ref	Result	Limit Units	Analyzed Referen	ce
TPH-D by GC (EPA8015_MOD)	1	3000	92 mg/kg	04/07/94 EPA8015	MOD

# Referenced notes for these results:

Surrogate
o-terphenyl

Recovery %

\_

C32

\* Surrogate diluted out.

\_ Page: 11 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 517A-32894 SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	910	94 mg/kg	04/06/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate o-terphenyl

Recovery %

C32

\*

<sup>\*</sup> Surrogate diluted out.

\_ Page: 12 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: 517A-32894 MATRIX SPIKE

SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method	
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed Reference	
TPH-D by GC (EPA8015_MOD)	1	150	% Rec	04/06/94 EPA8015_MOD	

### Referenced notes for these results:

Surrogate o-terphenyl Recovery %

C32

\* Surrogate diluted out.

\_ Page: 13 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610 Work Order: B4-03-322

SAMPLE ID: 517A-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	160	% Rec	04/11/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate o-terphenyl

Recovery %

MSD

C32

\* Surrogate diluted out.

\_ Page: 14 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

SAMPLE ID: METHOD BLANK SAMPLE DATE: 03/28/94 SAMPLE MATRIX: SOIL

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015 MOD	) 1	ND	2.0 mg/kg	04/06/94	EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate Recovery % o-terphenyl 83 C32 86

\_ Page: 15 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Wor

Work Order: B4-03-322

#### Referenced notes for this work order:

B403322

The chromatograms generally contained a pattern from C14 to C44, although integration occurred from C9 to C24 (diesel range).

\_ Page: 16 of 16

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610 Work Order: B4-03-322

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable Petroleum

Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.

Project Name/ Sample Team Memb Profit Center Project Mana	No. 1 FORT SURY 5/ ers <sup>2</sup> No. <sup>3</sup> 46/0 ager <sup>4</sup> C - 5m FM No. <sup>6</sup> 694-037	<b>CH</b> / 19029 Sam	Lai ect Contac	custor  nent Date estination b Contact ct/Phone	DY REI B/3/3/5/ 23/25/ 8 IF 195 9 C, Sci 12 (1) 2-	1999 1997 3/29/94 Bill Austin hepcoff	to: 10 THB RIT	:NC 48412
Sample 14 Number	Sample 15 Description/Type	Date/Time 16		<sup>7</sup> Sample <sup>18</sup>			Condition on <sup>21</sup>	Disposal <sup>22</sup> .
554C-32894	SOIL 0403345-01	3-28-94		20ans		TH Diesel	Receipt Coop 4°C	Record No.
512A-32894	62	1000				111111111111111111111111111111111111111	3/30 Fe	AB
621F-32894	03	10:10					USE O	MLY
5790-32899	04	10:20						
53713-32894	09	10:30						
537B OUP-32894	06	10:30					CFO	
101E-32894	07	10,40					HOE U	
559C - 32894	1 08	V 1100	4	4	V	4		
Special Instruction Possible Hazard I Non-hazard Fi Turnaround Time	dentification: <sup>24</sup> ammable 🔲 🛚 Skin Irri	7	<i>517A-</i> son B 📮	Unknown C Level: <sup>27</sup>		Sample Disposal: <sup>25</sup> Return to Client □ Disp	Dosal by Lab Archive	e (mos.

1. Relinquished by <sup>28</sup>/<sub>(Signature/Affiliation)</sub> Date: 3/29/ 1. Received by (Signature/Affiliation) Date: Time Time: 1700 2. Relinquished by (Signature/Affiliation) Date: 2. Received by Date: Time: (Signature/Affiliation) Time: 3. Relinquished by (Signature/Affiliation) Date: 3. Received by (Signature/Affiliation) Date: Time: Time: Client is aware that sample bottles have 32599 on them and then should be 3/28/94 Comments: 29

MCA 3/15/91



# ANALYSIS REJEST AND CHAIN OF CUSTODY RECORD (cont.)\*

5522	2/11/2
Reference Document No.3	18412
Page <u>2</u> of <u>2</u>	

Project Name FORT STORY

Project No. 5/9029

Samples Shipment Date

	ONE CONTAINER PER LINE								
Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time 16 Collected 3-24-44	Container 17	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.	
517A-32894	Soil 0403345-C	7-24-94	Am Per Glass	Deloral		TPH DIÈSE	600 4 C3/30 FIJE	Disposal 22 Record No.	
							FOR		
							USE	DVY	
·									
							FOR		
•							USE		
_									
								JIW L. T	
		:							
· · · · · · · · · · · · · · · · · · ·									
							F02		
· · · · · · · · · · · · · · · · · · ·									
							BF	3/29/94	
								777	

LIMS No. Use other side of this form to note details concerning check-in problems. **Preliminary Examination Phase:** Date cooler opened: C-of-C No.: By (print) Did cooler come with a shipping slip (air bill, etc.)? No If YES, enter carrier name & air bill no. here: Were custody seals on outside of cooler? (Yes No How many & where: Seal date: Seal name: Were custody seals unbroken and intact at the date and time of arrival: 3. Yés. No Did you screen samples for radioactivity using the Geiger Counter: ..... 4. Yes. No Were custody papers sealed in a plastic bag and taped inside of the lid? 5. (No. Yes Were custody papers filled out properly (ink, signed, etc.)? 6. Yes No Did you sign custody papers in the appropriate place? 7. Yes No 8. Was project identifiable from custody papers? ..... No If YES, enter project name at the top of this form. 9. If required, was enough ice used? No Type of ice: Have designated person initial here to acknowledge receipt of cooler: 10. B. Log-in Phase: Date samples were logged-in: Describe type of packing in cooler: 11. 12. Were all bottles sealed in separate plastic bags? Yes No 13. Did all bottles arrive unbroken & were labels in good condition? No Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? 14. Yes. No Did all bottle labels agree with custody papers? UELITED BY NOTES ON COC FLOW EXPORT, Yes 15. No Were correct containers used for the test indicated? ..... 16. (Yes) No 17. Were correct preservatives added to samples? ..... res No 18. Was a sufficient amount of sample sent for tests indicated? (Yes No 19. Yes No If NO, list by sample number: 20. Was the project manager called and status discussed? ..... (Yes No If yes, give details on the back of this form. By whom? Late: 21. Who was called? ( ARCIT

Cooler Receipt Form



# ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/19/94

Work Order: B4-04-049

P.O. Number: E94-039

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS002 314610

Date Received: 04/05/94 Number of Samples: 20 Sample Type: EXTRACT

I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIFI	<u>CATION</u>	LABORATORY #
032294-05A	Q403276-01	B4-04-049-01
032294-47C	Q403276-02	B4-04-049-02
032294-15A	Q403276-03	B4-04-049-03
032294-57C	Q403276-04	B4-04-049-04
032294-77D	Q403276-05	B4-04-049-05
032294-62C	Q403276-06	B4-04-049-06
032294-30B DUP	Q403276-07	B4-04-049-07
032294-114F	Q403276-08	B4-04-049-08
032294-30B	Q403276-09	B4-04-049-09
032294-94E	Q403276-10	B4-04-049-10
032294-89E	Q403276-11	B4-04-049-11
032294-35B	Q403276-12	B4-04-049-12
032294-72D	0403276-13	B4-04-049-13

Reviewed and Approved

Laboratory Director

American Council of Independent Laboratories International Association of Environmental Testing Laboratories American Association for Laboratory Accreditation Page: 2 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

Samples, continued from above:

SAMPLE IDENTIFIC	LABORATORY #	
032294-99E	0403276-14	B4-04-049-14
032294-10A	_	B4-04-049-14 B4-04-049-15
032294-119F		B4-04-049-16
032294-119F MS	Q403276-16	B4-04-049-17
032294-119F MSD	Q403276-16	B4-04-049-18
BLANK	Q403276	B4-04-049-19
BLANK SPIKE	Q403276	B4-04-049-20

#### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

IT ANALYTICAL SERVICES

SAMPLE ID: 032294-05A

Q403276-01

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	<u>Limit Units</u>	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	70	1.7 mg/kg	04/09/94	EPA8015_MOD

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

<sup>\*</sup> Surrogate not reported due to matrix interference.

Page: 4 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-47C

Q403276-02

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 55
 1.7 mg/kg
 04/09/94
 EPA8015\_MOD

314610

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

. Page: 5 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-15A

)A

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note	;	Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	38	1.7 mg/kg	04/09/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

89

Q403276-03

. Page: 6 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-57C Q403276-04

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 44 1.7 mg/kg 04/09/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate Benzo(a)pyrene Recovery %

. Page: 7 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-77D

Q403276-05

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

 Note
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 25
 1.7 mg/kg
 04/09/94
 EPA8015 MOD

314610

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

\_ Page: 8 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-62C

Q403276-06

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	46	1.9	mg/kg	04/09/94	EPA8015_MOD

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

.

<sup>\*</sup> Surrogate not reported due to matrix interference.

Page: 9 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-30B DUP Q403276-07

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D
 by GC
 (EPA8015\_MOD)
 1
 61
 1.7 mg/kg
 04/09/94
 EPA8015\_MOD

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

. Page: 10 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-114F

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Ref Result Limit Units Test Name Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 70 1.7 mg/kg 04/09/94 EPA8015 MOD

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene

Recovery %

Q403276-08

\_ Page: 11 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-30B

Q403276-09

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	85	1.7 mg/kg	04/09/94	EPA8015 MOD

#### Referenced notes for these results:

Surrogate

Recovery %

Benzo(a)pyrene

<sup>\*</sup> Surrogate not reported due to matrix interference.

. Page: 12 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-94B

Q403276-10

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Ref Result Limit Units Test Name Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 78 1.7 mg/kg 04/09/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate Benzo(a)pyrene

Recovery %

Page: 13 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-89E

Q403276-11

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	<u>Units</u>	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	85	1.7	mg/kg	04/09/94	EPA8015_MOD

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery % 120

. Page: 14 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-35B

Q403276-12

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	<u>Units</u>	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015_MOD)	1	40	1.7	mg/kg	04/09/94	EPA8015_MOD

#### Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

Page: 15 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-72D

Q403276-13

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	35	1.7 mg/kg	04/09/94 EPA8015 MOD

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene

Recovery % 102

Page: 16 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-998

Q403276-14

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	35	1.7 mg/kg	04/09/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

. Page: 17 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002

IT ANALYTICAL SERVICES
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-10A

Q403276-15

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	26	1.7 mg/kg	04/09/94 EPA8015 MOD

314610

#### Referenced notes for these results:

1 Surrogate Benzo(a)pyrene Recovery %

Page: 18 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-119F

Q403276-16

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	800	33 mg/kg	04/11/94	EPA8015 MOD

314610

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\*

<sup>\*</sup> Surrogate not reported due to matrix interference.

Page: 19 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-119F MS Q403276-16

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	12000	% Rec	04/11/94	EPA8015_MOD

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\*

\* Surrogate not reported due to matrix interference.

\_ Page: 20 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-119F MSD Q403276-16

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

 Note
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 9900
 % Rec
 04/11/94
 EPA8015\_MOD

314610

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\* Surrogate diluted out.

. Page: 21 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: BLANK

Q403276

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015 MOD) 7.3 1.7 mg/kg 1 04/11/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate Benzo(a)pyrene Recovery % 136

. Page: 22 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: BLANK SPIKE

Q403276

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015 MOD)	1	130	% Rec	04/11/94	EPA8015 MOD

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

\_ Page: 23 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-049

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable Petroleum

Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



# BYO4049 ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 48	,	40
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CORPOR	ATION			AIN OF C				ge 1 of <u>८</u>	
Project Name	/No. 1	destory S190	29 Sam	ples Shipm	ent Date	74/4/	94Bill 1	to: STAS PAT	
Sample Team Men			<del></del> _	Lab De	stination	8 # # # B	Hustin		
Profit Cente	r No. <u>3 (</u>	4610	A	Lab	Contact	t 9 Chu	HV9721) is Achieve CHY 31-8306 9423805964 Report t		
Project Ma	nager 4	Carrie >m	Proj	ect Contac	t/Phone	124/2-1	31-8806	10 PLAS DA	
Purchase Orde	r No. 6	F94-039		Carrier/W	aybill No	13 FW X	1423805964 Heport t	10: 147 17 17 17 17	
Required Report			*				PER LINE		
Sample <sup>14</sup> Number	Des	Sample <sup>15</sup>	Date/Time 16	Container 17	Sample <sup>1</sup>			Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
05A - 032294	EFT	Q403276-01	824(94) 3/24/94	Glass Via		<u></u>	DIESEL	(550 40)	Hacord Ieo.
476-		02						4/5/94	AB
15A-		03						L'USE O	MLY
57C-		04							
770 -	$\bot \bot$	05							A PO
62C -		4							
30B DUP-		07							
114F- V	14	4 06	1	1	1	4	V		
Special Instruct		<u> </u>	G F	3002	*(	his &	chip coff to fay	0 1 poult ASAD	
	Flammab	le 🔟 Skin Irrit		son B 🛄	Unknowi	/	oampie Disposal:/20	posal by Lap	
Turnaround Tim Normal 🖳 Rush	nt. Ji			QC I.	Level: <sup>2</sup>	7    .	Project Specific (specify):		
1. Relinquished b (Signature/Affiliation)	y 28 Bol	Ana #	ろかし Dat Tim	e: <u>५/५/</u> 9 e: १७७०	24		ved by 28	Date:	415/94
2. Relinquished by (Signature/Affiliation)	у		Dat Tim	e:e:		2. Receiv		Date: Time:	
3. Relinquished by (Signature/Affiliation)	<u></u>	<u></u>	Dat Tim	e:		3. Receiv	/ed by filiation)	Date: Time:	
Comments: 29				· <u></u>		<u></u>		Tillio.	
•									



### ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 519029

Reference Document No.30 474146
Page 2 of 2
Samples Shipment Date 4/4/94

#### ONE CONTAINER PER LINE Container 17 Sample 18 Sample 14 Sample 15 Description/Type Date/Time 16 **Pre-**19 Requested Testing 20 Disposal 22 Record No. Condition on 21 Gollected GT (1971) 3124194 Number Type Volume servative Program Receipt Fass Val EXT Q403276-09 308-03-2294 94E-89E -35B-720 99E-10A-1195 16 Q403276



# ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/19/94

Work Order: B4-04-047

P.O. Number: E94-039

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

Date Received: 04/05/94 Number of Samples: 20 Sample Type: EXTRACT

#### I. Introduction

Samples were labeled as follows:

SAMPLE IDENT	IFICATION .	LABORATORY #
032294-20A	Q403275-01	B4-04-047-01
032294-67D	Q403275-02	B4-04-047-02
032294-25B	Q403275-03	B4-04-047-03
032294-64D	Q403275-04	B4-04-047-04
032294-22B	Q403275-05	B4-04-047-05
032294-52C	Q403275-06	B4-04-047-06
032294-106F	Q403275-07	B4-04-047-07
032294-104E	Q403275-08	B4-04-047-08
032294-109F	Q403275-09	B4-04-047-09
032294-01A	Q403275-10	B4-04-047-10
032294-43C	Q403275-11	B4-04-047-11
032294-85E	Q403275-12	B4-04-047-12
032294-40B	Q403275-13	B4-04-047-13

Reviewed and Approved

Laboratory Director

American Council of Independent Laboratories International Association of Environmental Testing Laboratories American Association for Laboratory Accreditation Page: 2 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-047

#### Samples, continued from above:

SAMPLE IDENTIFICATION	LABORATORY #
032294-124F Q403275-14	B4-04-047-14
032294-82D Q403275-15	B4-04-047-15
032294-82D DUPQ403275-16	B4-04-047-16
032294-20A MSDQ403275-17	B4-04-047-17
032294-20A MS Q403275-18	B4-04-047-18
BLANK Q403275	B4-04-047-19
BLANK SPIKE Q403275	B4-04-047-20

#### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-20A

Q403275-01

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Reporting Note Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 46 1.7 mg/kg 04/08/94 EPA8015 MOD

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene

Recovery %

Page: 4 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-67D

Q403275-02

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit	Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015_MOD)	1	33	1.7	mg/kg	04/08/94	EPA8015_MOD

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 5 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-25B

Q403275-03

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 28 1.7 mg/kg04/08/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate Benzo(a)pyrene

Recovery %

Page: 6 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES
AUSTIN TY

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-64D

Q403275-04

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 22
 1.7 mg/kg
 04/08/94
 EPA8015\_MOD

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 7 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-22B

Q403275-05

**SAMPLE DATE: 03/24/94** SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Ref Result Limit Units Test Name Analyzed Reference TPH-D by GC (EPA8015 MOD) 1 31 1.9 mg/kg04/08/94 EPA8015 MOD

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene

\_ Page: 8 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-52C

Q403275-06

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Ref Result Limit Units Test Name Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 74 1.7 mg/kg 04/08/94 EPA8015 MOD

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene

Page: 9 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-106F

SAMPLE DATE: 03/24/94

Q403275-07

SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 40 1.7 mg/kg 04/08/94 EPA8015 MOD

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene

Page: 10 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-104E Q403275-08

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015	MOD) 1	53	1.7 mg/kg	04/08/94	EPA8015 MOD

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene

Recovery %

Page: 11 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-109F Q403275-09

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 41 1.7 mg/kg 04/08/94 EPA8015 MOD

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene

Recovery %

Page: 12 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-01A

Q403275-10

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	35	1.7 mg/kg	04/08/94	EPA8015 MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

\_ Page: 13 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001

314610

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-43C

Q403275-11

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit	Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	21	1.7	mg/kg	04/08/94	EPA8015 MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

. Page: 14 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-85E

Q403275-12

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	<b>Method</b>
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	33	1.7 mg/kg	04/08/94	EPA8015 MOD

# Referenced notes for these results:

Surrogate Benzo(a)pyrene

Recovery %

\_ Page: 15 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-40B

Q403275-13

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 25 1.7 mg/kg 04/08/94 EPA8015 MOD

# Referenced notes for these results:

Surrogate Benzo(a)pyrene

. Page: 16 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684 Work Order: B4-04-047

SAMPLE ID: 032294-124F Q403275-14

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Uni	ts Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	150	1.7 mg/	kg 04/08/94	EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

<sup>\*</sup> Surrogate not reported due to matrix interference.

. Page: 17 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-82D

Q403275-15

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	140	1.7 mg/kg	04/08/94	EPA8015 MOD

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

\_ Page: 18 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-82D DUPQ403275-16

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	140	1.7 mg/kg	04/08/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\*

. Page: 19 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-20A MSDQ403275-17

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	370	% Rec	04/08/94	EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\*

Page: 20 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-20A MS Q403275-18

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 270 % Rec 04/08/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate Benzo(a)pyrene

Recovery %

Page: 21 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

IT ANALYTICAL SERVICES

SAMPLE ID: BLANK

Q403275

SAMPLE DATE: 03/24/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	7.2	1.7 mg/kg	04/08/94	EPA8015 MOD

314610

#### Referenced notes for these results:

1 Surrogate Benzo(a)pyrene

Recovery %

Page: 22 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: BLANK SPIKE Q

Q403275

SAMPLE DATE: 03/24/94
SAMPLE MATRIX: EXTRACT

 Mote
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 120
 % Rec
 04/08/94
 EPA8015\_MOD

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

\_ Page: 23 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-047

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable
Petroleum
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference	Decument No.	101	] [		_ ]
Page 1 of		•		, -	

CORPORATI	ON	CHAI	A OL COS	IUDY KE	CURD" Pay	je i or <u>a</u>	
Project Name/N	10. 1 FORT SURY 519	3029 Sample	es Shipment C	Date 7 4/4/9	94 Bill t	0:5 IIIS PAT	
Sample Team Membe	rs <u>2</u>		Lah Destina	tion 8 7493	gustin .		
Profit Center N	lo. 3 46(0		Lab Con	tact <sup>9</sup> Ch	i Schocoff		
Project Manag	ger Carrie Sin MA	, Projec	t Contact/Ph	one 124/2-7	31-88%	10-th AS PH	
Purchase Order N	10.6 E94-039	Ca	rrier/Waybill	No. 12 Feel X	2423805964 Report to	); 10 49 117 VI [1	
Required Report Da	te 11 4/6/94	*					
	<del></del>				PER LINE		T
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected	ontainer <sup>17</sup> Sam <sub>l</sub> Type Volu	ple <sup>18</sup> Pre <sup>19</sup> me servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
20A-032294 E	XT Q40375-01	32494 G	6955 Val /ml	2  -	DIESEL	(-)000 J°C	arcon. Ministra
670-	02					734/8/84 JC	AB
35B-	03						WY
640 -	04						
72B-	05						/
SXC -	06						
106 F	01					And Carlotte	
1046-	V V 08	V	1		¥	U	
Special Instruction	s: 23 SDC	3- F50	00.	* Chi	Schop Coff to fax	Must ASAP	
Possible Hazard Id Non-hazard 🗀 Flar			n B 🛄 Unkr	nown	Sample Disposal: 25	osal by Lab	e (mos.)
Turnaround Time F Normal 🔲 Rush 🔟	Required: <sup>26</sup>		QC Leve		Project Specific (specify):	,	(
1. Relinquished by <sup>28</sup> (Signature/Affiliation)	Bob Freday	Date:	4/4/94		ived by 28	Date:	415/94
2. Relinquished by (Signature/Affiliation)		Date: Time:		2. Rece		Date: Time:	
3. Relinquished by (Signature/Affiliation)		Date: Time:		3. Rece	ved by (filiation)	Date: Time:	
Comments: 29							
				eria Para			



# B404047 **ANALYSIS REQUEST AND** CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.30 484145
Page 2 of 2
Samples Shipment Date 4/4/94

Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
09F-032294	EXPT 0403275-09	1 - A A A B - B	Glassilial			DESEL	G000 4°C	1100010 1101
01A - 13C- 15E- 10B-	10						#15/94 BC	
3C-	11							
5E-	12							
OB-	13							
245-	14							
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0A- M50	/7							<u> </u>
$A-\sqrt{m}$	18							
Blank 3/24/94	0403275							Milita (14 militaria) - <b>%</b> \$
ankSpiley	¥ &40327S	1	$\sqrt{}$	<b>V</b>	V	V	V	
•	•							
								***
							BF	Winter
							- PF	4477



# ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/19/94

Work Order: B4-04-051

P.O. Number: E94-039

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS006 314610

Date Received: 04/05/94 Number of Samples: 20 Sample Type: EXTRACT

I. Introduction

Samples were labeled as follows:

SAMPLE	IDENTIFIC	CATION	LABORATORY #
032494-	-400B	Q403322-01	B4-04-051-01
032494-	-442D	Q403322-02	B4-04-051-02
032494-	-403B	Q403322-03	B4-04-051-03
032494-	-445D	Q403322-04	B4-04-051-04
032494-	-487F	Q403322-05	B4-04-051-05
032494-	-39 <b>8A</b>	Q403322-06	B4-04-051-06
032494-	-482E	Q403322-07	B4-04-051-07
032494-	-484F	Q403322-08	B4-04-051-08
032494-	-379A	Q403322-09	B4-04-051-09
032494-	-421C	Q403322-10	B4-04-051-10
032494-	-418B	Q403322-11	B4-04-051-11
032494-	-383A	Q403322-12	B4-04-051-12
032494-	-425C	Q403322-13	B4-04-051-13

Reviewed and Approved:

Jon Bartell

Laboratory Director

- Page: 2 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

#### Samples, continued from above:

SAMPLE IDENTIFIC	LABORATORY #	
032494-463E	Q403322-14	B4-04-051-14
032494-467E	Q403322-15	B4-04-051-15
032494-460D	Q403322-16	B4-04-051-16
032494-460D MSD	Q403322-16	B4-04-051-17
032494-460D MS	Q403322-16	B4-04-051-18
BLANK	Q403322	B4-04-051-19
BLANK SPIKE	Q403322	B4-04-051-20

#### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

- Page: 3 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-400B

Q403322-01

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	56	1.7 mg/kg	04/11/94	EPA8015 MOD

314610

# Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

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- Page: 4 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-442D

Q403322-02

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

Not		Reporting		Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	60	1.9 mg/kg	04/11/94	EPA8015 MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

- Page: 5 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-403B

Q403322-03

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note	Reporting		Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	39	1.7 mg/kg	04/11/94 EPA8015 MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

- Page: 6 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-445D

Q403322-04

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note	Reporting		Date Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	25	1.9 mg/kg	04/11/94 EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

- Page: 7 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-487F

Q403322-05

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 74
 1.8 mg/kg
 04/11/94
 EPA8015\_MOD

314610

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

- Page: 8 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-398A

Q403322-06

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

No		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	18	1.7 mg/kg	04/11/94	EPA8015 MOD

314610

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

- Page: 9 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-482E

Q403322-07

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

	Note	Reporting		Date	Method
Test Name	Ref	Result	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015_MOD)	1	15	1.9 mg/kg	04/11/94	EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

- Page: 10 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-484F

Q403322-08

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015 M	(OD) 1	9.4	1.7 mg/kg	04/11/94	EPA8015 MOD

314610

#### Referenced notes for these results:

Surrogate Benzo(a)pyrene Recovery %

- Page: 11 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-379A

Q403322-09

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note	Reporting		Date	Method
Test Name	<u>Ref</u>	Result	<u>Limit</u> Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015_MOD)	1	190	1.7 mg/kg	04/11/94	EPA8015 MOD

314610

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

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- Page: 12 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610 IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-421C

Q403322-10

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

1		Reporting		Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	380	1.7 mg/kg	04/11/94	EPA8015 MOD

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

- Page: 13 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-418B

Q403322-11

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

Note		Reporting		Date	Method	
Test Name	<u>Ref</u>	Result	Limit	Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	260	1.7	mg/kg	04/11/94	EPA8015 MOD

# Referenced notes for these results:

Surrogate

Recovery %

Benzo(a)pyrene

- Page: 14 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-383A

Q403322-12

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015_MOD)	1	34	1.7 mg/kg	04/11/94	EPA8015 MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

- Page: 15 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-425C

Q403322-13

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	110	1.7 mg/kg	04/11/94	EPA8015 MOD

#### Referenced notes for these results:

Surrogate Recovery % Benzo(a)pyrene

- Page: 16 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX

AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-463E

Q403322-14

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	61	1.7 mg/kg	04/11/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

- Page: 17 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 802 4484

(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-467E

Q403322-15

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date	Method
Test Name	Ref	<u>Result</u>	Limit	Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	89	1.7	mg/kg	04/11/94	EPA8015 MOD

314610

## Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

- Page: 18 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-460D

Q403322-16

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note	Reporting		Date	Method
Test Name	Ref	<u>Result</u>	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	*	mg/kg	04/19/94	EPA8015_MOD

## Referenced notes for these results:

1 \* Extract received dry. Unable to analyze.

- Page: 19 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-460D MSD Q403322-16

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015\_MOD) 1 1700 % Rec 04/11/94 EPA8015 MOD

### Referenced notes for these results:

Surrogate Benzo(a)pyrene Recovery %

- Page: 20 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-460D MS Q403322-16

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

 Mote Test Name
 Ref Result PH-D by GC (EPA8015\_MOD)
 Ref Mode Result PH-D by GC (EPA8015\_MOD)
 Result PH-D Result PH-D by GC (EPA8015\_MOD)
 Limit Units
 Analyzed Reference
 Ref PH-D By GC (EPA8015\_MOD)

### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

- Page: 21 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: BLANK

Q403322

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date	Method
Test Name	Ref	Result	Limit U	nits	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	22	1.7 mg	g/kg	04/11/94	EPA8015 MOD

## Referenced notes for these results:

Surrogate

Recovery %

Benzo(a)pyrene

\* Surrogate not reported due to matrix interference.

- Page: 22 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

SAMPLE ID: BLANK SPIKE

Q403322

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Test Name Ref Result Limit Units Analyzed Reference TPH-D by GC (EPA8015 MOD) 1 130 % Rec 04/11/94 EPA8015 MOD

## Referenced notes for these results:

1 Surrogate Benzo(a)pyrene Recovery %

- Page: 23 of 23

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-051

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH GC

TPH-Extractable
Petroleum
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference	Document No.	484	14	4
Page 1 of	.2	• -	-	

CORPORA	TION	CHA	UN OF C	CUSTO	DY REC	<b>CORD*</b> Pa	ge 1 of <u>/</u>	
Project Name/	No. 1 FORT STORY.	5/9029 Sam	ples Shipm	ent Date	74/4/	99 Bill	to:5 1778 Pitt	
Sample Team Memt	_		Lab De	estination	8 THAS	AUSTIN		
Profit Center	No. 3 4610		Lat	Contact	: 9 Chu	Schrieff 31-880/6 Papart		
Project Mana	ager <u>4 Carrie Smit</u>	<u>/</u> Proje	ect Contac	t/Phone	12412-7	31-880/6	10 THAR PH	
Purchase Order	No. 6 E94-039		Carrier/W	/aybill No	13 FEDX	31-880/6 Peport t	50: 10 11/1/ 1/1/	<del></del>
Required Report D	Date 11 4/8/94		ONE	CONT	AINER	PER LINE		
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected	Container <sup>1</sup> Type	Sample 1			Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
400B-032494	EXPERCY SYCH	8475A47EQ 3/30/94	Closs Vial	In		DIESEL	Grap 400	
4420-032494							45 41 3	LAB
4038-	63						Loc	DIALL
4450-	OY							
4878-	05							
398 A-	a							
472 E.	OT							77. 30.0
484F- V	1 08		V	V		7	U	
Special Instructio		G F	5006	¥	Chris	Achepart to	ax results	
Possible Hazard I Non-hazard I	dentification: 24 ammable 🔟 Skin Irrit	ant 🔟 Pois	son B 🛄	Unknowr		Ach Coff 10 (Sample Disposal: 25 () Return to Client 1 Disp	osal by Lab Arc	hive (mos.)
Turnaround Time Normal 🖳 Rush			QC I.L	Level: 2		Project Specific (specify):	7	()
1. Relinquished by (Signature/Affiliation)	28 Barraga	Date Time	: 4/4/9			ved by 28	Date of Time	
2. Relinquished by (Signature/Affiliation)		Date Time	9:		2. Receiv	/ed by filiation)	Dat Tim	te:
3. Relinquished by (Signature/Affiliation)		Date Time			3. Receiv		Dat Tim	te:
Comments: 29	ONE MORE	SAMI	PE	15-	7) (	35 SSNOT 1		



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 519029

Reference Document No.30  $\frac{484/44}{2}$  Page  $\frac{2}{3}$  of  $\frac{2}{3}$ 

Samples Shipment Date 4/4/94

## ONE CONTAINER PER LINE

······································	<del></del>	<del></del>				PER LINE	<u></u>	
Sample 14 Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
79 A-032494	EARACT 040322-09	3/30/9Y	GlossVial	Inl		DIESEL	G000 4°C	
21C-	10						4594	
18B-	U							
73 A-	12							· 美人 将为供
sc-	13							
53 <b>E</b> -	14							
57 <b>€</b>	15							
0D- +ms	1 16	$\downarrow$	7	3X	<b>\</b>	<b>&gt;</b>		
OD BF							DA	· 養 · 「麥拉」(公)。※
20 - 41414 J							44511	
CANK 3130 194	EXPLANT 0403222	3/30/94	ClassVial	Inl	<b>)</b>	DIESEL		
KANK SPIKE	EXPERT 6403322 X 0403322	3/30/94	*	$\downarrow$	4	<u> </u>	4/5/1/1	
							<u> </u>	<u> </u>
	· · · · · · · · · · · · · · · · · · ·							
:							BF	4/4/94
				į	<u> </u>		1//	(/ (/ //



# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/23/94

Work Order: B4-04-092

P.O. Number: E94-040

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS006

314610

Date Received: 04/07/94 Number of Samples: 3 Sample Type: EXTRACT

I. Introduction

Samples were labeled as follows:

 SAMPLE IDENTIFICATION
 LABORATORY #

 502F-032494
 Q403322-17
 B4-04-092-01

 BLANK
 Q403322
 B4-04-092-02

 BLANK SPIKE
 Q403322
 B4-04-092-03

Reviewed and Approved

Jon Bartell

Laboratory Director

Page: 2 of 6

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-092

### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

#### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 6

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-092

SAMPLE ID: 502F-032494

Q403322-17

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

 Note
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015 MOD)
 1
 56
 1.7 mg/kg
 04/14/94
 EPA8015 MOD

314610

## Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 4 of 6

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-092

SAMPLE ID: BLANK

Q403322

SAMPLE DATE:

SAMPLE MATRIX: EXTRACT

	Note	Reporting		Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	11	1.7 mg/kg	04/14/94 EPA8015 MOD

## Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

682-1-89

Page: 5 of 6

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006

314610

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-092

SAMPLE ID: BLANK SPIKE Q403322

SAMPLE DATE:

SAMPLE MATRIX: EXTRACT

 Mote Test Name
 Ref Result Name
 Ref Result Name
 Limit Units
 Analyzed Reference
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 130
 % Rec
 04/14/94
 EPA8015\_MOD
 MOD

## Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

Page: 6 of 6

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-092

### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015 MOD) TEST CODE TPH GC

TPH-Extractable
Petroleum
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

<i>B40 4092</i> Reference Document No. 484150	)
Page 1 of 2	,

CORPORA	TION		Gr	IANY OF	C021	UDT KE	COKD"	Pag	يو ۱ ۱۵ <u>حد</u>	
Project Name/	No. 1FOR	T STORY SI	9029 Sa	mples Ship	ment Da	te 74/6/	94	Bill t	0.5 IMS Pitt	
Sample Team Memb						on 8.THS				
Profit Center				L	ab Conta	ct 9 Chris	Schepcoff			
Project Man	ager <u>4Ceri</u>	rie Lynn Smil	th Gamber	•				<b>5</b>	10 II AS Pott	· .
Purchase Order	No. 6	94-040	···	Carrier/		lo. 13 Fed X	2423806104	Heport to	3:10 ITAS Pitt Htn: Carrie Gnn S	with Gamber
Required Report D	Date 11 A	SAP 4/13	194							
Sample <sup>14</sup>	<del></del>		$\mathcal{F}(\mathbf{H}^{\prime}\mathcal{H}(\mathcal{U}))$	16 Containe			R PER LINE	20		
Number	Descri	iample <sup>15</sup> ption/Type	Collected	Туре	Volume	o <sup>18</sup> Pre- <sup>1</sup> servative		sting <sup>20</sup> 1	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
502F -032494	EST QY	103322-17	415/94	Glass	(ml		Diesel		Good 1°C	ND
		403338							FOR	AB
Blank Spikeaussis	EAT	403358								MLY
630F - 3289Y	840	3358-01								
588D-32894		62					:			
588D DUP-32894		03								
5468- 32894		04								W. 1000
591E-32894	1	V 05	1				<b>Y</b>		$\bigvee$	
Special Instruction	ns: <sup>23</sup>	Chis &	chipley	1 HON	as u	sults	ASM			
Possible Hazard I	ldentifica Iammable	tion: <sup>24</sup>		Coison B 🗐		1	Sample Disposa		osal by Lab 🗓 💮 Archive	g(mos.)
Turnaround Time	Require	d: <sup>26</sup>			C Level:	27	Project Specific (	- · ·	osal by Lab 🔟 - Al Cilive	(1105.)
1. Relinquished by (Signature/Affiliation)	28 Bolte	nan PH	5 D Ti	ate: 4/6/ me:     16/		1. Rece (Signature/	eived by 28 //	: Ch	Date:	4-7-44
2. Relinquished by (Signature/Affiliation)		0	_	ate: me:	7	2. Rece (Signature/	ived by Affiliation)		Date: Time:	
3. Relinquished by (Signature/Affiliation)				ate: me:		3. Rece			Date: Time:	
Comments: 29 *	This 1	s the rea	naining	Sampl	e fra	m SDC	f FS006 -	REMA	TINDER OF SAM	PLES
		OF FSC		·						



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

 $\begin{array}{c} \mathcal{B}\mathcal{Y}\mathcal{O}\mathcal{Y}\mathcal{O}\mathcal{G}\mathcal{Z}\\ \text{Reference Document No.}^{30} \ \underline{\mathcal{489150}}\\ \text{Page}\ \underline{\mathcal{A}}\ \text{of}\ \underline{\mathcal{A}} \end{array}$ 

Project Name FORT STORY

Project No. 519029

Samples Shipment Date 4/6/94

					PER LINE		
Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Container Collected Type	17 Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
49C-32894	ENT 0403358-06	Collected Type  4/5/94 Class  Uial	Ine	}	DIESEL	Receipt 600 d / C 600 d / C 600 d / C	
07A-32894	07						
26F-32894 76E-32894 76E-32894 76E-32894	08						
GE-32894	09					\$\$ 11.\$ 12. 25. 25.	海 多金 苦苦症
6E-32894	09						
GE-32894	V V 09	V	1		<u> </u>		
			,				
							<u> </u>
		,					·漢學問題。
						80 - 20 p 10 m	
			1				
						1000年	, Alexandra (Linear)
/			<del>                                     </del>			BF	4/6/94
			1				4011



## ANALYTICAL **SERVICES**

## CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story 2790 Mosside Boulevard

Monroeville, PA 15146 Attn: Tom Mathison

April 28, 1994

Job Number: Q403321/322/358 Revision 2

The Certificate of Analysis is for the following:

Client Project ID:

519029

Date Received by Lab:

03/25 and 30/94

Number of Samples:

Twenty-six

Sample Type:

Soil

## 1.0 Introduction

On March 25 and 30, 1994, twenty-six samples were received at ITAS Pittsburgh, labeled as follows:

450D-032494	497F-032494	430C DUP-032494	546B-32894
492F-032494	413B-032494	408B-032494	591E-32894
393A-032494	388A-032494	502F-032494	549C-32894
435C-032494	455D-032494	630F-32894	507A-32894
440C-032494	455D DUP-032494	588D-32894	626F-32894
477E-032494	472E-032494	588D DUP-32894	596E-32894
477E DUP-032494	430C-032494		

The analysis for TPH-diesel was performed at our ITAS laboratory in Austin, Texas. These results are enclosed.

Reviewed and Approved:

Carrie L. Smith-Gamber, Project Manager



# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/23/94

Work Order: B4-04-093

P.O. Number: E94-040

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS008 314610

Date Received: 04/07/94 Number of Samples: 13 Sample Type: EXTRACT

I. Introduction

Samples were labeled as follows:

SAMPLE IDENTI	<u>FICATION</u>	LABORATORY #
630F-32894	Q403358-01	B4-04-093-01
588D-32894	Q403358-02	B4-04-093-02
588DDUP-32894	Q403358-03	B4-04-093-03
546B-32894	Q403358-04	B4-04-093-04
591E-32894	Q403358-05	B4-04-093-05
549C-32894	Q403358-06	B4-04-093-06
507A-32894	Q403358-07	B4-04-093-07
626F-32894	Q403358-08	B4-04-093-08
596E-32894	Q403358-09	B4-04-093-09
596E-32894	MATRIX SPIKE	B4-04-093-10
596E-32894	MSD	B4-04-093-11
BLANK	Q403358	B4-04-093-12
BLANK SPIKE	Q403358	B4-04-093-13

Reviewed and Approved:

Jon' Bartell

Laboratory Director

Page: 2 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684 Work Order: B4-04-093

### II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

### III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 314610

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 630F-32894

Q403358-01

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

 Mote
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015 MOD)
 1
 330
 1.7 mg/kg
 04/14/94
 EPA8015 MOD

## Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 4 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 588D-32894

Q403358-02

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

 Note
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015 MOD)
 1
 120
 1.8 mg/kg
 04/14/94
 EPA8015 MOD

### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 5 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008

(512) 892-6 314610 Work Ord

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-093

IT ANALYTICAL SERVICES

SAMPLE ID: 588DDUP-32894 Q403358-03

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015 MOD)
 1
 100
 1.8 mg/kg
 04/14/94
 EPA8015\_MOD

## Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

Page: 6 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 546B-32894

Q403358-04

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	450	2.3 mg/kg	04/14/94 EPA8015_MOD

314610

#### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\*

\* Surrogate not reported due to matrix interference.

Page: 7 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 591E-32894

Q403358-05

SAMPLE DATE: 04/05/94 SAMPLE MATRIX: EXTRACT

Note Reporting Date Method Analyzed Reference Test Name Ref Result Limit Units TPH-D by GC (EPA8015\_MOD) 04/14/94 EPA8015\_MOD 1 160 1.9 mg/kg

314610

### Referenced notes for these results:

1 Surrogate Benzo(a)pyrene Recovery %

Page: 8 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 549C-32894

Q403358-06

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date	Method
Test Name	Ref	Result	<u>Limit</u>	Units	<u>Analyze</u>	d Reference
TPH-D by GC (EPA8015_MOD)	1	93	1.8	mg/kg	04/14/9	4 EPA8015_MOD

## Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 9 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 314610

AUSTIN, TX (512) 892-6684

Work Order: B4-04-093

IT ANALYTICAL SERVICES

SAMPLE ID: 507A-32894

Q403358-07

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	590	20 mg/kg	04/15/94 EPA8015_MOD

## Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

Page: 10 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 626F-32894

Q403358-08

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

	Note	1	Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	6.3	1.7 mg/kg	04/15/94 EPA8015_MOD

314610

### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 11 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 596E-32894 Q403358-09

SAMPLE DATE: 04/05/94 SAMPLE MATRIX: EXTRACT

Note Reporting
Ref Result Limit Units
1 290 1.8 mg/kg Date Method Test Name Analyzed Reference

TPH-D by GC (EPA8015\_MOD) 1 290 1.8 mg/kg

04/14/94 EPA8015 MOD

## Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\* Surrogate not reported due to matrix interference.

Page: 12 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 596E-32894

MATRIX SPIKE

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

	Note	1	Reporting	Date Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	4000	% Rec	04/14/94 EPA8015_MOD

314610

### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

140

Surrogate biased high due to matrix interference.

Page: 13 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 596E-32894

MSD

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

	Note	R	eporting	Date Method
Test Name	_ Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	4600	% Rec	04/14/94 EPA8015 MOD

### Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

137

Surrogate biased high due to matrix interference.

Page: 14 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008

314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: BLANK

Q403358

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	11	1.7  mg/kg	04/14/94 EPA8015_MOD

#### Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 15 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-093

SAMPLE ID: BLANK SPIKE Q403358

SAMPLE DATE: 04/05/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date <b>Method</b>
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	130	% Rec	04/14/94 EPA8015 MOD

## Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

Page: 16 of 16

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-093

## IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable Petroleum

Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

B404093Reference Document No. 484150Page 1 of 2

<b>-</b>		5-5-4-	. 6 . 30				- 10/11	27	- ma 0 H	
Project Name/		URT STORY S	9029				e 7 <i>4/6/</i> 9		11 to:5 FABS Pitt	
Sample Team Memb				l			n 817745/			
Profit Center				. ~	Lab	Contac	t 9 Chris	Schepcaff	N10	
		arrie Lyon Smi	th Gamba	Sroject C	Contac	t/Phon	= 12412-	131-88%	to 10 FTAS PITT	
Purchase Order				Carr	er/W	aybill No	o. 13 Feel X.	2423806164 nepun	to: 10 ITAS Pitt Attal Carrie Gan S	with Gamber
Required Report D	ate 11	ASMP 4/1	194						#	
<del></del>		<del></del>	og Pranil					PER LINE	<u> </u>	T
Sample <sup>14</sup> Number	De	Sample <sup>15</sup> scription/Type	Date/Tir Collecte	ne <sup>16</sup> Cont	:ainer' ' /pe	Volume Sample	Pre- <sup>19</sup> servative	Requested Testing <sup>2</sup> Program	O Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
502F -032494	EXT	<i>Q4033</i> 3.2 -17	4/5/94	/ 640 VI	55 U	(ml	-	' Diese /	Good 1°C	
Blank a403358	69T	9403358 94033322							FURL	AB
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130F - 32894	0	1403358-01								
588D-32894	$\perp$	62								S 1 12 ***
58ED DUP-32894	_	03								
546B- 32894		04								
5916-32894	1	V 05	1		<u> </u>			<u> </u>	$\bigvee$	
Special Instruction	ns: <sup>23</sup>	Cheis &	chipe	AL F	0 10	N M	sults	ASAA		
Possible Hazard I	dentif ammal		tant ⊡l	Poison E	$U^{-}$	Unknow		Sample Disposal: 25	sposal by Lab	(
Turnaround Time Normal Aush	Regu				_=	Level:	27	Project Specific (specify		(mos.)
1. Relinquished by (Signature/Affiliation)	Boli	Finlan Et	B	Date: 4	1619		<del></del> -	ived by 28 //		4-7-44
2. Relinquished by (Signature/Affiliation)	•			Date: Time:			2. Rece		Date: Time:	
3. Relinquished by (Signature/Affiliation)				Date: Time:			3. Rece		Date: Time:	
Comments: 29 *	This	is the re	mainin	y San	ple	from	n 500	- FSOCK - REM	AINDER OF SAMO	PLS
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## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 519029

B404093Reference Document No.30  $\underline{489150}$ Page  $\underline{3}$  of  $\underline{2}$ 

Samples Shipment Date 4/6/94

ONE CONTAINER PER LINE ExaMAGO Date/Time <sup>16</sup> Container <sup>17</sup> Sample 18
Collected Type Volume Sample 14 Number **Pre-**19 Requested Testing 20 Program Sample 15 Condition on 21 Disposal 22 Description/Type Туре servative Receipt Record No. Glass ə 415194 ENT 194358-06 me 507A-3289Y 08 09 09 Yellow: Field copy



# ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

ITAS-EXPORT
IT CORPORATION
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE SMITH

Date: 04/23/94

Work Order: B4-04-050

P.O. Number: E94-039

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS005 31

314610

Date Received: 04/05/94 Number of Samples: 20 Sample Type: EXTRACT

# I. Introduction

Samples were labeled as follows:

SAMPLE IDENTI	FICATION PROPERTY OF THE PROPE	LABORATORY #
032494-450D	Q403321-01	B4-04-050-01
032494-492F	Q403321-02	B4-04-050-02
032494-393A	Q403321-03	B4-04-050-03
032494-435C	Q403321-04	B4-04-050-04
032494-440C	Q403321-05	B4-04-050-05
032494-477E	Q403321-06	B4-04-050-06
032494-477E D	UP Q403321-07	B4-04-050-07
032494-497F	Q403321-08	B4-04-050-08
032494-413B	Q403321-09	B4-04-050-09
032494-388A	Q403321-10	B4-04-050-10
032494-455D	Q403321-11	B4-04-050-11
032494-455D D	UP Q403321-12	B4-04-050-12
032494-472E	0403321-13	B4-04-050-13

Reviewed and Approved:

Jon Bartell

Laboratory Director

Page: 2 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

# Samples, continued from above:

SAMPLE IDENTIFIC	LABORATORY #	
032494-430C	Q403321-14	B4-04-050-14
032494-430C DUP	Q403321-15	B4-04-050-15
032494-408B	Q403321-16	B4-04-050-16
032494-408B MSD	Q403321-16	B4-04-050-17
032494-408B MS	Q403321-16	B4-04-050-18
BLANK	Q403321	B4-04-050-19
BLANK SPIKE	Q403321	B4-04-050-20

# II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

# III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Page: 3 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-450D

Q403321-01

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Metho	d
Test Name	Ref	Result	Limit Units	Analyzed Refer	ence
TPH-D by GC (EPA8015 MOD)	1	38	2.0 mg/kg	04/11/94 EPA80	15 MOD

314610

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 4 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-492F

Q403321-02

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

 Mote
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 26
 1.7 mg/kg
 04/11/94
 EPA8015\_MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 5 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

AUSTIN, TX 314610

(512) 892-6684

Work Order: B4-04-050

IT ANALYTICAL SERVICES

SAMPLE ID: 032494-393A

Q403321-03

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	27	1.7 mg/kg	04/11/94 EPA8015_MOD

# Referenced notes for these results:

1 Surrogate Benzo(a)pyrene Recovery %

Page: 6 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-435C

Q403321-04

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015 MOD)	1	34	1.7  mg/kg	04/11/94	EPA8015_MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 7 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-440C

Q403321-05

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	51	2.0  mg/kg	04/11/94	EPA8015_MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 8 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-477E

Q403321-06

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015 MOD)	1	620	9.4 mg/kg	04/11/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

.

Page: 9 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-477E DUP Q403321-07

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	<u>Ref</u>	<u>Result</u>	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	1900	9.1 mg/kg	04/11/94 EPA8015 MOD

314610

# Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\*

<sup>\*</sup> Surrogate not reported due to matrix interference.

Page: 10 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-497F

Q403321-08

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

 Mote
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015\_MOD)
 1
 64
 1.7 mg/kg
 04/11/94
 EPA8015\_MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 11 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-413B

Q403321-09

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	<u>Limit</u> Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	40	1.7 mg/kg	04/11/94 EPA8015 MOD

314610

# Referenced notes for these results:

Surrogate

Recovery %

Benzo(a)pyrene

Page: 12 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

IT ANALYTICAL SERVICES AUSTIN, TX

AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-388A

Q403321-10

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	<u>Ref</u>	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	310	8.8 mg/kg	04/11/94 EPA8015_MOD

314610

# Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

...

Page: 13 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-455D

Q403321-11

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	Result	Limit Uni	ts Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	430	9.0 mg/	kg 04/11/94	EPA8015_MOD

314610

# Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\*

Page: 14 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-455D DUP Q403321-12

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	420	8.8 mg/kg	04/11/94 EPA8015 MOD

# Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a)pyrene

\*

Page: 15 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684 Work Order: B4-04-050

SAMPLE ID: 032494-472E

Q403321-13

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	<u>Ref</u>	Result	Limit Un	nits Analyzed	Reference
TPH-D by GC (EPA8015_MOD)	1	97	1.7 mg	g/kg 04/11/94	EPA8015_MOD

314610

# Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery %

Page: 16 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-430C

Q403321-14

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date Method
Test Name	Ref	Result	Limit Units	Analyzed Reference
TPH-D by GC (EPA8015_MOD)	1	120	1.8 mg/kg	04/11/94 EPA8015_MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 17 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-430C DUP Q403321-15

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting	Date	Method
Test Name	Ref	<u>Result</u>	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015 MOD)	1	160	1.7 mg/kg	04/11/94	EPA8015 MOD

# Referenced notes for these results:

1 Surrogate
Benzo(a)pyrene

Recovery % 90

Page: 18 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-408B

Q403321-16

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

	Note		Reporting		Date Method
Test Name	Ref	Result	Limit 1	Units	Analyzed Reference
TPH-D by GC (EPA8015 MOD)	1	87	1.7 1	ma/ka	04/11/94 EPA8015 MOD

314610

# Referenced notes for these results:

1 Surrogate

Recovery %

Benzo(a) pyrene

\*

<sup>\*</sup> Surrogate not reported due to matrix interference.

Page: 19 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES

AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-408B MSD Q403321-16

SAMPLE DATE: 03/30/94 SAMPLE MATRIX: EXTRACT

	Note	Reporting		Date	Method
Test Name	Ref	Result	Limit Units	Analyzed	Reference
TPH-D by GC (EPA8015 MOD)	) 1	1100	% Rec	04/11/94	EPA8015 MOD

# Referenced notes for these results:

Surrogate Recovery % Benzo(a)pyrene 68

Page: 20 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-408B MS Q403321-16

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

 Note
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015 MOD)
 1
 1000
 % Rec
 04/11/94
 EPA8015 MOD

314610

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 21 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES

**AUSTIN, TX** (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: BLANK

Q403321

SAMPLE DATE: 03/30/94
SAMPLE MATRIX: EXTRACT

 Note
 Reporting
 Date
 Method

 Test Name
 Ref
 Result
 Limit
 Units
 Analyzed
 Reference

 TPH-D by GC (EPA8015 MOD)
 1
 7.7
 1.7 mg/kg
 04/15/94
 EPA8015\_MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 22 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005

314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

SAMPLE ID: BLANK SPIKE

Q403321

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

	Note	Reporting		Date	Method
Test Name	Ref	Result	Limit Units	<u>Analyzed</u>	Reference
TPH-D by GC (EPA8015_MOD)	1	140	% Rec	04/15/94	EPA8015_MOD

# Referenced notes for these results:

Surrogate
Benzo(a)pyrene

Recovery %

Page: 23 of 23

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES AUSTIN, TX (512) 892-6684

Work Order: B4-04-050

# IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015 MOD) TEST CODE TPH GC

TPH-Extractable
Petroleum
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.

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# ANALYSIS REQUEST AND ROCHAIN OF CUSTODY RECORD\*

Reference Document No.	49414	7
Page 1 of 📈		

CORPOR	ATION		CH	AIN OF C	CUSTO	DY REC	CORD* Pag	ge 1 of <u></u>	
Project Name	/No. 1 Fo	RT STORY	<i>5190</i> 795an	nples Shipm	ent Date	7 4/4/	94 Bill t	:0:5 #19 PiH	
ample Team Men	nbers 2	<del></del>		Lab De	stination	8 F8 AS	<i>fustin</i>	^	
Profit Cente	r No. 3 C	1610		Lab	Contact	: 9 Chu	i Achip Cuff		
Project Ma	nager <u>4 (</u>	irrie Smit	ク Pro	ject Contac	t/Phone	12412-7	931-886 (1) 1938/5764 Report to	10 HAS RA	
Purchase Orde	r No. <sup>6</sup> 🗜	94-039		Carrier/W	aybill No	13FEDX	12385764 110point		
Required Report	Date 11	4/8/94	*	ONE	CONT	AINER	PER LINE		
Sample <sup>14</sup> Number	Descr	Sample <sup>15</sup>	Date/Time Collected	Container Type	Sample 1	8 <b>Pre-</b> 19		Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
4500 -032494	EXT OF	103321-01	3/30/94	GlassVial	Inl	-	DIESEC	Good 4°C	
492F -		02						4594	LIAB,
393A -		03						, 4, 5, 5	VINLY
135C-		04		·					
140 C -		05							
1776 -		06						lige	
177E DUP-		07		1 3 6 7					
497F- V	1	VO	1		¥		<b>V</b>	U	
Special Instruct	ions: <sup>23</sup>	SDG	FS0	05 *	Chair	Scho	Coppe to Law 1	went ASAP	
Possible Hazard			2,	pison B 🛄	Unknow	n L	Sample Disposal: <sup>25</sup>	oosal by Lab Archi	ve(mos.)
Turnaround Tim Normal 🖳 Rusi		ed: <sup>26</sup>		QC I.L	C Level: 2	27; V	Project Specific (specify):_		
1. Relinquished b	v <sup>28</sup> 0 N	Money	AS PACATION	nte: 4/4/9 ne: 1700		T	ived by 20 (	Date    Time	
2. Relinquished b (Signature/Affiliation)		$\mathcal{O}$	Da	nte:		2. Rece (Signature/A	ved by (filiation)	Date Time	
3. Relinquished b (Signature/Affiliation)	ıy		Da	nte: ne:		3. Rece		Date Time	:
Comments: 29					<del></del>	I	<del></del>		
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# **ANALYSIS REQUEST AND** CHAIN OF CUSTODY RECORD (cont.)\*

BY04050 Reference Document No.30 484147 Int.)\* Page 2 of 2

Project No. 5/902-9

Samples Shipment Date 4/4/94

			ONE	CONTA	INER	PER LINE		
Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container <sup>17</sup> Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
13B - 032494	Get Q403321-09	3/30/94	GlassVial	Inc		DIESEL	(ser 4°(	
88A-	10						41594 BC	
1550 -	$\bigcup$ $u$							
SSD OUP-	12							
72E-	13							
30C-	14				,			
zic Dup-	15							
08B - V	1450							
108B - 032494	M5P 16 M5						<b>&gt; 1</b>	· · · · · · · · · · · · · · · · · · ·
m5 10813 - 032494	M3							
Blank (4/03/33)	(403324							
Jan 8 12474	V 9403321	<b>\</b>	V	V	1	V	V	
							Sear Mark Strait	
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14 B GRETHRIER CIRCLE CEERPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# CHAIN-OF-CUSTODY REPORT

SOLUTIONS LOG #: 04191993-010-01,02,03

COMPANY NAME: I T CORPORATION PROJECT MANAGER: TOM MATHISON BILLING ADDRESS: 2790 MOSSIDE BLVD

MONROEVILLE, PA 15146

TELEPHONE #: (412) 372-7701

PAX #:

P.O.#: FORT STORY #519029

DATE/TIME RECEIVED: 04/19/93; 1728

SAMPLER: JACK BOHERG

SAMPLE ID	PIELD	SAMPLED DATE	SAMPLED TIME	FOF	CONTAINER	LOCATION	PRESERV.	MINIX
01A1 02A1 03A1	519029505 519029506 519029507	04/19/93 04/19/93 04/19/93	1120 1140 1200	1 1 1	40 ML VOA 40 ML VOA 40 ML VOA	FORT STORY FORT STORY FORT STORY	none 1	OIT OIT OIT

SAMPLE ID	ANALYSIS TO BE PER	FORMED DUE DATE
01A1>03A1	PCBs	04/21/93

CONDITION OF SAMPLE: NOT PRESERVED

RECEIVED BY: L. PALAMBO

RELINQUISHED BY: JACK BOHERG

PAGE 1 OF 2

DATE: APRIL 21, 1993

I T CORPORATION ATTN: TON MATHISON 2790 MOSSIDE BLVD MONROEVILLE, PA 15146

PROJECT NAME: FORT STORY FTP PROJECT NUMBER: 519029

SOLUTIONS LOG: 04191993-010-01,02,03

MATRIX: SOIL

DATE/TIME SAMPLED: 04/19/93; 1120, 1140, 1200

# METEOD 8080-PCB

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: EXTRACTION DATE: ANALYSIS DATE: INSTRUMENT ID:	519029505 01A1 04/19/93 04/19/93 04/20/93 04/21/93 HP ECD	519029506 02A1 04/19/93 04/19/93 04/20/93 04/21/93 HP ECD	519029507 03A1 04/19/93 04/19/93 04/20/93 04/21/93 HP ECD	MDL* N/A N/A N/A N/A N/A N/A
DILUTION FACTOR:	l	1	1	1
UNITS:	mg/Rg	mg/kg	mg/Kg	mg/Kg

# COMPOUNDS

ALL AROCLORS

< 0.5 < 0.5 < 0.5

\*MDL IS THE METHOD DETECTION LIMIT. THE MDL IS USED TO DETERMINE THE PRACTICAL QUANTITATIVE LIMIT FOR EACH MATRIX TYPE. THE MATRIX FACTOR IS TABLED ON PAGE 8080-3 OF SW-846.

PAGE 2 OF 2

SOLUTIONS LABORATORIES, INC.

814 B GREENBRIER CIRCLE
CHESAPEARE, VA 23320
(T) (804) 420-0467
(F) (804) 420-4204

# CHAIN-OF-CUSTODY REPORT

SOLUTIONS LOG #: 06071993-002-01 THRU 06

COMPANY NAME: I T CORPORATION PROJECT MANAGER: LOU BERNARDO

BILLING ADDRESS: TDY INN

15910 WARWICK BOULEVARD

NEWPORT NEWS, VA 23602

TELEPHONE #: 1-888-6102

FAX #:

P.O.#: 474960

DATE/TIME RECEIVED: 06/07/93; 1320

SAMPLER: RICK SCHROPP

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1	λ	06/07/93	11:00	1	40 HL VOA	FT. STORY	ICE	SOIL
02A1	В	06/07/93	11:23	1	40 ML VOA	FT. STORY	ICE	SOIL
03A1	Ċ	06/07/93	12:00	ī	40 ML VOA	FT. STORY	ICE	SOIL
04A1	Ď	06/07/93	12:20	1	40 ML VOA	FT. STORY	ICE	SOIL
05A1	E	06/07/93	12:30	1	40 ML VOA	FT. STORY	ICE	SOIL
06A1	F	06/07/93	12:45	í	40 ML VOA	FT. STORY	ICE	SOIL

SAMPLE ID	ANALYSIS TO BE	E PERFORMED	DUE DATE
01A1>06A1	TPH 8015	·	06/08/93

CONDITION OF SAMPLE: GOOD

RECEIVED BY: JO ANN FEROLINO

RELINQUISHED BY: RICK SCHROPP

PAGE 1 OF 3

814-B GRENBÄIER CIRCLE CHESAPRARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# REPORT OF ANALYSIS

DATE: JUNE 8, 1993

I T CORPORATION ATTN: LOU BERNARDO 2790 MOSSIDE BLVD MONROEVILLE, PA 15146

PROJECT NAME: FORT STORY PROJECT NUMBER: 519029 P.O. #: 474960

SOLUTIONS LOG: 06071993-002-01 THRU 06

MATRIX: SOIL

DATE/TIME SAMPLED: 06/07/93; 11:00, 11:23, 12:00, 12:20, 12:30, 12:45

# METHOD MODIFIED 8015

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR: UNITS: DET. LMT. ANALYSIS	A 01A1 06/07/93 06/07/93 06/07/93 HP/FID 1.0 mg/Kg 2.85	B 02A1 06/07/93 06/07/93 06/07/93 HP/FID 1.0 mg/Kg 2.85	C 03A1 06/07/93 06/07/93 06/07/93 HP/FID 1.0 mg/Kg 2.85	D 04A1 06/07/93 06/07/93 06/07/93 HP/FID 1.0 mg/Kg 2.85	-
TOTAL PETROLEUM HYDROCARBONS	<2.85	< 2.85	< 2.85	< 2.85	
TYPE	N <b>√</b> A	N/A	N/A	N/A	

PAGE 2 OF 3

814-B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# REPORT OF ANALYSIS

DATE: JUNE 8, 1993

I T CORPORATION ATTN: LOU BERNARDO 2790 MOSSIDE BLVD MONROEVILLE, PA 15146

PROJECT NAME: FORT STORY PROJECT NUMBER: 519029

P.O. #: 474960

SOLUTIONS LOG: 06071993-002-01 THRU 06

MATRIX: SOIL

DATE/TIME SAMPLED: 06/07/93; 11:00, 11:23, 12:00, 12:20, 12:30, 12:45

### METHOD MODIFIED 8015

CLIENT NO:	E	F
LAB NO:	05A1	06A1
SAMPLE DATE:	06/07/93	06/07/93
RECEIVED DATE:	06/07/93	06/07/93
DATE EXTRACTED:	06/07/93	06/07/93
ANALYSIS DATE:	06/07/93	06/07/93
INSTRUMENT ID:	HP/FID	HP/FID
DILUTION FACTOR:	1.0	1.0
UNITS:	mg/Kg	mg/Kg
DET. LMT.	2.85	2.85

# **ANALYSIS**

TOTAL PETROLEUM

77.6 3.16 **HYDROCARBONS** 

DIESEL DIESEL TYPE

REVIEWED BY:

PAGE 3 OF 3

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PROJ	IECT NI	J <b>MB</b>	ER	•	·		F	PROJECT NAME: FT. STORY				5030	1100	TPH 418.1				PCBs□		Semi VOA					Tot P					: 							
I Attes	t that the	prope ler's	r fie Sig	ld sampli gnature	ing	proc	edu	ires	were used during the collection of these			3550		503 B&D □	- 1	8020 □	8010	8080□ F	8150	NOA□	S	GFAA	□ React □	Phenols ☐ Cyanide ☐	TKN .	□ TOC□											
FIELD ID	SOURCE OF SAMPLE	SOL LAB#:	ainers	ner ype			MAT	TRIX	( 		1	PRES	SERV	/ATI	ON		SAM	<b>IPLING</b>	HS		Grease 50	3 1		l	1	ł	letals 🗆	Metals	AA 🗆	Flash	CO	1	□qoo				
			# Containers	Container Size/Type	Water	Soil	Air	Sludge	Liquid	Other	HCI	HINGS HOSE	NaOH	lce Ice	None	Other	Date	Time	TPH GC		8 I G	DIEAU	EPA 602 □	EPA 601	EPA 608	EPA 615 □	TCLP Metals	Silver	Lead FLAA	Corr	Phenols	Ammonia 🗆	BOD□				
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814 B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# CHAIN-OF-CUSTODY REPORT

\* AMENDED ON JULY 20, 1993.

SOLUTIONS LOG #: 07131993-006-01

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: AL DAVIS

BILLING ADDRESS: 814-B GREENBRIER CIRCLE

CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467 FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 07/13/93; 2040

SAMPLER: GREG KISER

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT		LOCATION	PRESERV.	MATRIX
01A1	01	07/13/93	1815	1	250 ML AM	POOL-FT. STORY	none	SLUDGE
					: - <u>Y</u>			
SAMPLE I	D .	ANAL	YSIS T	O BE	PERFORMED		וטם	E DATE

07/15/93 TOTAL LEAD (GFAA) 01A1 \* TCLP 8 METALS, TCLP BENZENE, BENZENE 07/19/93 01A1

\* NEW ANALYSIS ADDED ON 07/15/93 PER AL DAVIS.

CONDITION OF SAMPLE: NOT PRESERVED

RECEIVED BY: M. RUTH GLOVER

RELINQUISHED BY: GREG KISER

PAGE 1 OF 2

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# REPORT OF ANALYSIS

DATE: JULY 20, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: FT. STORY PROJECT NUMBER: N/A

SOLUTIONS LOG: 07131993-006-01

MATRIX: SLUDGE

----

DATE/TIME SAMPLED: 07/13/93; 1815

SOL LOG	# FIELD ID	ANALYSIS	RESUL	T UNITS	D.F.	DET_L	T. ME	THOD/DATE/TIME/ANALYST	
01 <b>A</b> 1	01	TOTAL LEAD	99.0	mg/Kg	25	0.050		7421/07-14-93/1200/LP	
01A1	01	TCLP ARS	ENIC	<0.002	mq/L	1	0.002	1311/7060/07-19-93	/1320/LP
01A1	01	TCLP BAR	IUM	<0.150	mq/L	1	0.150	1311/7080/07-19-93	/1130/LP
01A1	01	TCLP CAD	MUUM	0.060	mq/L	1	0.010	1311/7130/07-19-93	/1230/ <b>LP</b>
01A1	01	TCLP CHR	MUIMO	<0.033	mq/L	1	0.033	1311/7190/07-19-93	/1250/LP
01A1	. 01	TCLP LEAD	D	3.07	mq/L	1	0.099	1311/7420/07-19-93	/1150/LP
01A1	01	TCLP MER	CURY	0.0008	mg/L	1	0.000	2 1311/7470/07-19-93	/1500/LP
01A1	01	TCLP SEL	ENIUM	0.804	mq/L	1	0.002	1311/7740/07-19-93	/1345/LP
01A1	01	TCLP SIL	VER	<0.016	mg/L	1	0.016	1311/7760/07-19-93	/1100/LP

814 B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# CHAIN-OF-CUSTODY REPORT

SOLUTIONS LOG #: 07211993-002-01 THRU 14

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: AL DAVIS

BILLING ADDRESS: 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467 FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 07/21/93; 1145

SAMPLER: A. C. DAVIS

			the second second					
SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01 <b>A</b> 1	721-1	07/21/93	0735		40 ML VOA	FT. STORY	ICE	soil
02A1	721-2	07/21/93	0745	i	40 ML VOA	FT. STORY	ICE	SOIL
03A1	721-3	07/21/93	0748	ī	40 ML VOA	FT. STORY	ICE	SOIL
04A1	721-4	07/21/93	0758	• 1	40 ML VOA	FT. STORY	ICE	SOIL
05A1	721-5	07/21/93	0805	ĩ	40 ML VOA	FT. STORY	ICE	SOIL
0 <b>6A1</b>	721-6	07/21/93	0814	ī	40 ML VOA	FT. STORY	ICE	SOIL
07A1	721-7	07/21/93	0820	1	40 ML VOA	FT. STORY	ICE	SOIL
08A1	721-8	07/21/93	0822	1	40 ML VOA	FT. STORY	ICE	SOIL
09 <b>A</b> 1	721-9	07/21/93	0825	1	40 ML VOA	FT. STORY	ICE	SOIL
10 <b>A</b> 1	721-10	07/21/93	0837	1	40 ML VOA	FT. STORY	ICE	SOIL
11 <b>A</b> 1	721-11	07/21/93	0900	1	40 ML VOA	FT. STORY	ICE	SOIL
12 <b>A</b> 1	721-12	07/21/93	0914	1	40 ML VOA	FT. STORY	ICE	SOIL
13 <b>A</b> 1	721-13	07/21/93	0920	1	40 ML VOA	FT. STORY	ICE	SOIL
14A1	721-14	07/21/93	0907	1	40 ML VOA	FT. STORY	ICE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORME	ED	·	DUE DATE
			* te -	•
01A1>14A1	TPH 3550/8015	e =	1 = 100	07/26/93

CONDITION OF SAMPLE: GOOD

RECEIVED BY: J. DONAHUE

RELINQUISHED BY: DOROTHY S. SMALL

PAGE 1 OF 4

814-B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# REPORT OF ANALYSIS

DATE: JULY 27, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC, FT. STORY

PROJECT NUMBER: N/A

SOLUTIONS LOG: 07211993-002-01 THRU 14

MATRIX: SOIL

DATE/TIME SAMPLED: 07/21/93; 0735, 0745, 0748, 0758, 0805, 0814, 0820, 0822,

0825, 0837, 0900, 0914, 0920, 0907

# METHOD 3550 MODIFIED 8015

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR: UNITS: ANALYSIS	721-1 01A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg	721-2 02A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg	721-3 03A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg	721-4 04A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg	721-5 05A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg
			<del></del>		
TOTAL PETROLEUM HYDROCARBONS	3.58	1.52	< 0.10	< 0.10	31.9
TYPE	M. OIL	M. OIL	- · · · N/A	N/A	M. OIL

814-B GREENBRIER CIRCLE
CHESAPEARE, VA 23320
(T) (804) 420-0467
(F) (804) 420-4204

# REPORT OF ANALYSIS

**DATE: JULY 20, 1993** 

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: FT. STORY PROJECT NUMBER: N/A

SOLUTIONS LOG: 07131993-006-01

MATRIX: SLUDGE

DATE/TIME SAMPLED: 07/13/93; 1815

### METHOD BTEX 602

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: EXTRACTION DATE: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR: UNITS: COMPOUNDS	01 01A1,TCLP EXT 07/13/93 07/13/93 07/15/93 07/19/93 HP/FID 1 ug/L	01 01A1, SLUDGE 07/13/93 07/13/93 N/A 07/19/93 HP/FID 1 ug/Kg	MDL* N/A N/A N/A N/A N/A N/A 1/A HP/FID 1 ug/L
BENZENE	3.50	< 2.0	0.2

\*MDL IS THE METHOD DETECTION LIMIT.

REVIEWED BY:

DOROTHY S SMALL

PAGE 3 OF 3

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT OF ANALYSIS

DATE: JULY 27, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC, FT. STORY

PROJECT NUMBER: N/A

SOLUTIONS LOG: 07211993-002-01 THRU 14

MATRIX: SOIL

DATE/TIME SAMPLED: 07/21/93; 0735, 0745, 0748, 0758, 0805, 0814, 0820, 0822, 0825, 0837, 0900, 0914, 0920, 0907

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR: UNITS:	721-6 06A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg	721-7 07A1 07/21/93 07/21/93 07/21/93 07/26/93 HP/FID 0.25 mg/Kg	721-8 08A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg	721-9 09A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg	721-10 10A1 07/21/93 07/21/93 07/21/93 07/22/93 HP/FID 0.25 mg/Kg
ANALYSIS					· · · · · · · · · · · · · · · · · · ·
TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	37.6	< 0.10	< 0.10
TYPE	N/A	N/A	M. OIL	N/A	N/A

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT OF ANALYSIS

DATE: JULY 27, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC, FT. STORY

PROJECT NUMBER: N/A

SOLUTIONS LOG: 07211993-002-01 THRU 14

M. OIL

MATRIX: SOIL

DATE/TIME SAMPLED: 07/21/93; 0735, 0745, 0748, 0758, 0805, 0814, 0820, 0822,

0825, 0837, 0900, 0914, 0920, 0907

#### METHOD 3550 MODIFIED 8015

CLIENT NO:	721-11	721-12	721-13	721-14	
LAB NO:	11A1	12A1	13A1	14A1	
SAMPLE DATE:	07/21/93	07/21/93	07/21/93	07/21/93	
RECEIVED DATE:	07/21/93	07/21/93	07/21/93	07/21/93	* -
DATE EXTRACTED:	07/21/93	07/21/93	07/21/93	07/21/93	
ANALYSIS DATE:	07/22/93	07/22/93	07/22/93	07/22/93	
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	
DILUTION FACTOR:	0.25	0.25	-0.25	0.25	
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	î.
ANALYSIS					
			-		
TOTAL PETROLEUM					
HYDROCARBONS	90.9	14.7	1.41	< 0.10	
			. NAS.,		

KEROSINE

M. OIL

REVIEWED BY:

TYPE

Dorothy S. Small of DOROTHY SJ SMALL

N/A

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ID.	SOUR OF SAMP	·	SOL LAB#:	Containers	ner /pe	 	M	ATR	IX	<del></del>		PRE	SERV	/ATI	ON		SAM	IPLIN	3	☐ SH C	rease 50	BTEX only 602 □		1		1	TCLP Metals	Silver   Metals	AA 🗆	Flash	1		□ доэ						
	, .			# Cont	Container Size/Type	Water	Soil	Sludge Clark	Liquid	Other	HCI	HNO3	NaCH NaCH NaCH	Ice	None	Other	Date	Time	ļ	трн ос	Oil & G	BTEX	EPA 602 □	EPA 601 □	EPA 608	EPA 615 □	TCLP N	Silver	Lead FLAA	Corr	Phenols	Ammonia	ВОБ		<u> </u>				
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814 B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### CHAIN-OF-CUSTODY REPORT

SOLUTIONS LOG #: 07271993-004-01 THRU 16

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: D. SMALL

BILLING ADDRESS: 814-B GREENBRIER CIRCLE

CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467 FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 07/27/93; 1700 SAMPLER: DOROTHY S. SMALL

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1,A2	184-16-C-12	07/27/93	0930	2	40 ML VOA	FT. STORY	ICE	SOIL
02A1,A2	352-16-E-24	07/27/93	0935	2	40 ML VOA	FT. STORY	ICE	SOIL
03A1	531-16-B-48	07/27/93	0935	-				
				1	40 ML VOA	FT. STORY	ICE	SOIL
04 <b>A</b> 1	238-15-F-12	07/27/93	0950	1	40 ML VOA	FT. STORY	ICE	SOIL
05 <b>A1,A2</b>	267-15-A-24	07/27/93	0956	2	40 ML VOA	FT. STORY	ICE	SOIL
06 <b>3</b> 1	393-15-A-36	07/27/93	1004	1	40 ML VOA	FT. STORY	ICE	SOIL
07 <b>A1,A2</b>	155-14-B-12	07/27/93	1013	2	40 ML VOA	FT. STORY	ICE	SOIL
08A1,A2	350-14-E-24	07/27/93	1019	2	40 ML VOA	FT. STORY	ICE	SOIL
09A1	518-14-A-48	07/27/93	1025	ī	40 ML VOA	PT. STORY	ICE	SOIL
10A1,A2	533-14-B-48	07/27/93	1030	2	40 ML VOA	FT. STORY	ICE	SOIL
11A1,A2	30-13-B-5	07/27/93	1034	5	40 ML VOA	FT. STORY	ICE	SOIL
12AI	223-13-E-12	07/27/93	1037	ī	40 ML VOA	FT. STORY	ICE	SOIL
13A1.A2	475-13-E-36	07/27/93	1102	-	40 ML VOA	FT. STORY	ICE	SOIL
14A1,A2	601-13-E-38	07/27/93	1115		40 ML VOA	FT. STORY	ICE	SOIL
				-				
15 <b>A</b> 1	238	07/27/93	0950	1	40 ML VOA	FT. STORY	ICE	SOIL
16 <b>A</b> 1	18-D-5	07/27/93	1126	1	40 ML VOA	FT. STORY	ICE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORMED	DUE DATE
01A1>16A1	TPH 3550/8015	08/02/93

CONDITION OF SAMPLE: GOOD

RECEIVED BY: JULIE DONAHUE

RELINQUISHED BY: DOROTHY S. SMALL

814-B GREENBRIER CIRCLE CHESAPRARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# REPORT OF ANALYSIS

DATE: AUGUST 2, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC PROJECT NUMBER: N/A

SOLUTIONS LOG: 07271993-004-01 THRU 16

MATRIX: SOIL

07/27/93; 0930, 0935, 0945, 0950, 0956, 1004, 1013, 1019, 1025, 1030, 1034, 1037, 1102, 1115, 0950, 1126 DATE/TIME SAMPLED:

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DIL. FACTOR: UNITS: ANALYSIS	184-16-C-12	352-16-E-24	531-16-B-48	238-15-F-12	267-15-A-24
	01A1	02A1	03A1	04A1	05A1
	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
	07/30/93	08/02/93	07/30/93	07/30/93	07/30/93
	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
	0.25	0.25	0.25	0.25	0.25
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
TOTAL PETROLEUM HYDROCARBONS TYPE	24.0 M. OIL	< 0.10 N/A	< 0.10 N/A	< 0.10 N/A	< 0.10 N/A

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# REPORT OF ANALYSIS

DATE: AUGUST 2, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC PROJECT NUMBER: N/A

SOLUTIONS LOG: 07271993-004-01 THRU 16

MATRIX: SOIL

DATE/TIME SAMPLED: 07/27/93; 0930, 0935, 0945, 0950, 0956, 1004, 1013, 1019,

1025, 1030, 1034, 1037, 1102, 1115, 0950, 1126

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DIL. FACTOR: UNITS: ANALYSIS	393-15-A-36	155-14-B-12	350-14-E-24	518-14-A-48	533-14-B-48
	06A1	07A1	08A1	09A1	10A1
	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
	08/02/93	07/30/93	07/30/93	07/30/93	07/30/93
	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
	0.25	0.25	0.25	0.25	0.25
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
TOTAL PETROLEUM					
HYDROCARBONS	< 0.10	< 0.10	< 0.10	29.6	31.9
	N/A	N/A	N/A	M. OIL	M. OIL
		41/44	41/42	511	

814-B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204 REPORT OF ANALYSIS

DATE: AUGUST 2, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC PROJECT NUMBER: N/A

SOLUTIONS LOG: 07271993-004-01 THRU 16

MATRIX: SOIL

DATE/TIME SAMPLED: 07/27/93; 0930, 0935, 0945, 0950, 0956, 1004, 1013, 1019,

1025, 1030, 1034, 1037, 1102, 1115, 0950, 1126

30-13-B-5	223-13-E-12	475-13-E-36	601-13-E-38	238
11 <b>A</b> 1	12A1	13A1	14A1	15A1
07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
07/27/93	07/27/93	07/27/93 -	07/27/93	07/27/93
07/29/93		07/29/93	07/29/93	07/29/93
HP/FID		- · · · · ·	HP/FID	HP/FID
0.25	0.25	0.25	0.25	0.25
ma/Ka	ma/Ka	ma/Ka	ma/Ka	mg/Kg
57 5	g, a.g			
	and the special of the	* - * * * * * * * * * * * * * * * * * *		
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
			,	
N/A	N/A	N/A	- N/A	N/A
	11A1 07/27/93 07/27/93 07/27/93	11A1 12A1 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/29/93 07/29/93 HP/FID HP/FID 0.25 0.25 mg/Kg mg/Kg	11A1 12A1 13A1 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/29/93 07/29/93 07/29/93 HP/FID HP/FID HP/FID 0.25 0.25 0.25 mg/Kg mg/Kg mg/Kg	11A1 12A1 13A1 14A1 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/27/93 07/29/93 07/29/93 07/29/93 HP/FID HP/FID HP/FID HP/FID 0.25 0.25 0.25 0.25 mg/Kg mg/Kg mg/Kg mg/Kg

814-B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204 REPORT OF ANALYSIS

DATE: AUGUST 2, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC PROJECT NUMBER: N/A

SOLUTIONS LOG: 07271993-004-01 THRU 16

MATRIX: SOIL

DATE/TIME SAMPLED: 07/27/93; 0930, 0935, 0945, 0950, 0956, 1004, 1013, 1019,

1025, 1030, 1034, 1037, 1102, 1115, 0950, 1126

# METHOD 3550 MODIFIED 8015

CLIENT NO: 18-D-5
LAB NO: 16A1
SAMPLE DATE: 07/27/93
RECEIVED DATE: 07/27/93
DATE EXTRACTED: 07/27/93
ANALYSIS DATE: 07/29/93
INSTRUMENT ID: HP/FID
DIL. FACTOR: 0.25
UNITS: mg/kg

ANALYSIS

TOTAL PETROLEUM

HYDROCARBONS < 0.10

TYPE N/A

REVIEWED BY:

Josephy S. Small, p DOROTHY S. SMALL

SOLUTION' OG #  O 12 1 1 3 -  COMPANY NAME:	W		٥  -		814 Cl	4-B hes	Gi	reei eak	nb e.	rie VA	r (	es, I Circl 3320	e			<del></del>												CO EST				
Solutions	inv. 1	<b>}</b> ≤5	Ξ()X	<u>ع)</u> ک	<b>304</b> )	42	0-0	467	7/I	Fax	42	20-42	204							A	NA	LY	SIS	RI	EQU	JES	T					
PROJECT MANAGEI	R:	-			ONE					P.C				1													Τ					_
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PROJECT NUMBER:			J	PK(	)   		NAN P 1		ر	,				5030	TDU 419.1	E N			PCBs□		Semi					Tot P						
I Attest that the proper fiel samples. Sampler's Sig		_	_			usec	d dur	ing t	he	colle	ectio	on of the	hese	355074	<u>ا</u> د	8020					VOA □		GFAA 🗆	React	ge □		TOC					
FIELD SOURCE SOL (a)	,	T			Ma	7						Q		<del> </del>	503 B&D		8020	8010	□ 0808	8150		als		Flash 🗆	Cyanide	IKN I	COD	İ				
ID OF LAB#:	ner		MA	TRIX		$oldsymbol{\perp}$	PRI	ESER'	VA:	TION	<del></del>	SAM	IPLING	HS	9269	nly 60					letals [	Metals	AA	Flas	l_	ia 	8	ļ	'			
ID OF LAB#: SAMPLE COO THE SAMPLE	Container Size/Type	Water	Air	Sludge	Liquid	HCI	HN03	H2SO4	NaOH	None	Other	Date	Time	TPH GC	ا ق	BTEX only 602	EPA 602	EPA 601	EPA 608	EPA 615	TCLP Metals	Silver 🗆	Lead FLAA	Соп	Phenols	Ammonia	ВОБ		j			
189 12 01 2	40 VDA		1		1	Ť		1	卞	<u> </u>	T	2/21	0980	+ -		1					<del>                                     </del>					È	一	$\vdash$				_
352 16-52 16-84 238 15-512 19-10-10-10-10-10-10-10-10-10-10-10-10-10-	1				$\top$							1	0935	7.42												ļ —						_
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		<u> </u>													FA	X																
CONTAINER TYPE KEY: VOA= VOLATILE ORGANI												MOUT	H SP	ECLA	AL E	IAND	LING	<del>}</del> :		EXP	EDIT	ED	72 F 8 F	IR □	•	8 HR 4 HR			HR 🗆 HR 🗆	2 HR		

SOLUTION'S LOG#  COMPANY NAME:	Solutions Laboratories, Inc. 814-B Greenbrier Circle Chesapeake, VA 23320	CHAIN-OF-CUSTODY RECORI AND ANALYSIS REQUEST
Sylidians Env. Assec	(804) 420-0467/Fax 420-4204	ANALYSIS REQUEST
PROJECT MANAGER:	PHONE: P.O#	
ADDRESS (Office)	SITE LOCATION:	<del>-1</del> _
(0.11.00)	H. Stoney	3:1 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
PROJECT NUMBER:	PROJECT NAME:	Semi VOA  Semi VOA
	Larc	
I Attest that the proper field sampling processamples. Sampler's Signature:	edures were used during the collection of these	
	Towthy 55mall	
	MATRIX PRESERVATION SAMPLI	
# Container Size/Type Soil	Air Sludge Liquid Other HNO3 H2SO4 NaOH Ice None Other	TPH GC HS   Solution
325 11 2 VOYA X	X 2/27 10	
136-12 12		37
13E-12 175 13E-34 13 Z 10E-38 14 Z	<u> </u>	02
154-38 14 2		
238    S		
18-D-3	<del>-{-{-}}-}-</del>	26 4
125		
RELINQUISHED BY SAMPLER: DATE		REMARKS/SPECIAL DETECTION LIMITS:
Dorolly Sommel 7-27.		<u>u</u>
RELINQUISHED BY: DATE	: TIME: RECEIVED BY:	
RELINQUISHED BY: DATE	: TIME: RECEIVED BY:	SPECIAL REPORT REQUIREMENTS:
		FAX
CONTAINER TYPE KEY: GL=GLASS AM- VOA= VOLATILE ORGANIC CONTAINER I		SPECIAL HANDLING: EXPEDITED 72 HR  48 HR  24 HR  12 HR  8 HR  4 HR  HR

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814 B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### CHAIN-OF-CUSTODY REPORT

SOLUTIONS LOG #: 08231993-001-01 THRU 06

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: AL DAVIS

BILLING ADDRESS: 814-B GREENBRIER CIRCLE

CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467

FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 08/23/93; 1205

SAMPLER: A. C. DAVIS

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1,A2	1-A-S-01	08/23/93	1027	2	4 OZ GL	FT. STORY	ICE	SOIL
02A1,A2	3-F-S-124	08/23/93	1030	2	4 OZ GL	FT. STORY	ICE	SOIL
03A1,A2	4-A-S-04	08/23/93	1025	2	4 OZ GL	FT. STORY	ICE	SOIL
04A1,A2	8-D-12-203	08/23/93	1105	2	4 OZ GL	FT. STORY	ICE	SOIL
05 <b>A1,A2</b>	9-B-36-471	08/23/93	1058	2	4 OZ GL	FT. STORY	ICE	SOIL
06A1,A2	11-B-24-284	08/23/93	1039	2	4 OZ GL	FT. STORY	ICE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORMED		DU	JE DATE
	• •	rr aut i	4.5	
01A1>06A1	TPH 3550/8015		30	3/30/93

CONDITION OF SAMPLE: GOOD

RECEIVED BY: JO ANN FEROLINO

RELINQUISHED BY: A. C. DAVIS

PAGE 1 OF 3

814-B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# REPORT OF ANALYSIS

DATE: AUGUST 30, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC SITE PROJECT NUMBER: N/A

SOLUTIONS LOG: 08231993-001-01 THRU 06

MATRIX: SOIL

DATE/TIME SAMPLED: 08/23/93; 1027, 1030, 1025, 1105, 1058, 1039

### METHOD 3550 MODIFIED 8015

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR: UNITS: ANALYSIS	1-A-S-01 01A1 08/23/93 08/23/93 08/26/93 08/27/93 HP/FID 0.25 mg/Kg	3-F-S-124 02A1 08/23/93 08/23/93 08/26/93 08/26/93 HP/FID 0.25 mg/Kg	4-A-S-04 03A1 08/23/93 08/23/93 08/26/93 08/26/93 HP/FID 0.25 mg/Kg	8-D-12-203 04A1 08/23/93 08/23/93 08/26/93 08/26/93 HP/FID 0.25 mg/Kg	9-E-36-471 05A1 08/23/93 08/23/93 08/26/93 08/26/93 HP/FID 0.25 mg/Kg
MADISIS					·
TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	< -0.10	< 0.10	3.99
TYPE	N/A	N/A	N/A	N/A	DIESEL W

PAGE 2 OF 3

814-B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT OF ANALYSIS

DATE: AUGUST 30, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: LARC SITE PROJECT NUMBER: N/A

SOLUTIONS LOG: 08231993-001-01 THRU 06

MATRIX: SOIL

DATE/TIME SAMPLED: 08/23/93; 1027, 1030, 1025, 1105, 1058, 1039

### METHOD 3550 MODIFIED 8015

CLIENT NO:

11-B-24-284

LAB NO:

06A1

SAMPLE DATE:

08/23/93

RECEIVED DATE:

08/23/93

DATE EXTRACTED:

08/26/93

ANALYSIS DATE:

08/26/93

INSTRUMENT ID:

HP/FID

DILUTION FACTOR: 0.25

UNITS:

mg/Kg

#### ANALYSIS

TOTAL PETROLEUM

HYDROCARBONS

12.7

TYPE

M. OIL

REVIEWED BY:

DOROTHY S. SMALL

PAGE 3 OF 3

SOLUTION: 1.0G #  0823/193-001  COMPANY NAME:	Solutions Laboratories, Inc. 814-B Greenbrier Circle Chesapeake, VA 23320																				
SOLUTIONS ENV.		20-0467/Fax 420-4							ANA	LY	'SIS	RI	EQU	JES	T						
PROJECT MANAGER:	PHONE:	P.O#	÷	14				T						Γ			Γ		Π	Τ	Τ
AL DAVIS						1 1									1						
ADDRESS (Office)	SITE LOCA	ATION:		出		1 1							i	ļ				İ	i		
804-B GREENBRIER	HT.	STORY, VA.			H 418.1 ☐ MTBE ☐				Semi VOA	$\mathbb{H}$		ĺ							1		
PROJECT NUMBER:	PROJECT I	NAME:		5030			[	PCBs	Semi					Tot P							
I Attest that the proper field sampling proc	<del></del>		hasa	M	D 🗆			۶				React [		ı	тосП			'		l	l
samples. Sampler's Signature:	Q.C.	d during the conection of t	liese	3550	જુ	8020	8010	8080 8150	VOA□		GFAA □	æ	Cyanide 🗌	TKN	1 1						
	IATRIX	PRESERVATION SAN	APLING	□SH	ease 50.	l f	4.	- 1	etals 🗌	Metals	□ <b>\$</b>	Flash 🗌		1	□сор□				,		
Constant Contract	Air Sludge Liquid Other HCI	HNO3 H2SO4 NaOH Ice None Other	Time	трн сс	Oil & Grease 503 B BTEX only 602 □	EPA 602 □	EPA 601	EPA 608 □ EPA 615 □	TCLP Metals	Silver □ Metals	Lead FLAA	Corr	Phenols	Ammonia 🗆	Вор□				ļ		
1-A-S 01 01 2 4026L -		<del>1                                    </del>	1027	4																	
3-F-\$ 124 62 2 4		1-11	०ठ०।	سا									,								
4-A-S 04 03 2	·		1025	4	- 1																
8-D-12 203 04 2 -	<del>`</del>		1105	4	-				_												L
9-E-36471 05 2	<del>-                                     </del>	<del>                                     </del>	1058	<u>-</u>			_		<u> </u>												_
1+B-24 2B4 06 2 V -	+++	<del>                                     </del>	1039	<u></u>	_	$\vdash$		_	-				_					<b>——</b>			_
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	11//	<del>                                     </del>		+	_	$\dashv$	-+	+	┼		<u> </u>					<del>                                     </del>					
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RELINQUISHED BY SAMPLER: DATE	: TIME:	RECEIVED BY:	•	I	REMAR	KS/SP	ECIA	L DE	ECT	ION I	LIMI	TS:								1	
RELINQUISHED BY: DATE	: TIME:	RECEIVED BY:	<del>'</del>																		
				s	SPECIAL	L REP	ORT	REQU	IREM	ENT	S:										_
RELINQUISHED BY: DATE 8 23		RECEIVED BY:	·C:	F	FAX																
CONTAINER TYPE KEY: GL=GLASS AM VOA= VOLATILE ORGANIC CONTAINER			TH SPE		HANDI DA			EXI	PEDIT	ED	72 H 8 H	IR X	•	8 HR 4 HR			IR □ IR □		2 HR	₹ 🗆	

814 B GREENBRIER CIRCLE CHESAPRAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### CHAIN-OF-CUSTODY REPORT

SOLUTIONS LOG #: 08031993-003-01 THRU 32

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: AL DAVIS

BILLING ADDRESS: 814-A GREENBRIER CIRCLE CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467

FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 08/03/93; 1545 SAMPLER: DOROTHY S. SMALL

	FIELD	SAMPLED	SAMPLED	# OF				
SAMPLE ID	SAMPLE ID	DATE	TIME	CONT.	CONTAINER	LOCATION	PRÉSERV.	MATRIX
01 <b>A</b> 1	12-A-24	08/03/93	1035	•	40 ML VOA	FT. STORY	NONE	SOIL
02A1	11-C-S	08/03/93	1040	•	40 ML VOA	FT. STORY	NONE	SOIL
03A1	11-E-S	08/03/93	1043		40 ML VOA	FT. STORY	NONE	SOIL
04A1	11-E-S	08/03/93	1045	;		FT. STORY	NONE	SOIL
05A1	11-F-3 11-B-24	08/03/93	1050	•	40 ML VOA 40 ML VOA	FT. STORY	NONE	SOIL
06A1	10-C-12	08/03/93	1055	1			NONE	SOIL
07A1	10-E-36	08/03/93	1100	ī	40 ML VOA	FT. STORY	NONE	SOIL
08A1	9-A-12			1	40 ML VOA	FT. STORY		
09A1		08/03/93	1104	1	40 ML VOA	FT. STORY	NONE	SOIL
	9-B-24	08/03/93	1120	1	40 ML VOA	FT. STORY	NONE	SOIL
10A1	9-E-36	08/03/93	1128	1	40 ML VOA	FT. STORY	NONE	SOIL
11A1	9-F-36	08/03/93	1133	1	40 ML VOA	FT. STORY	NONE	SOIL
12A1	8- <b>λ</b> -S	08/03/93	1140	1	40 ML VOA	FT. STORY	NONE	soll
13A1	8- <b>A</b> -12	08/03/93	1150	1	40 HL VOA	FT. STORY	NONE	SOIL
14 <b>A</b> 1	8-B-12	08/03/93	1145	1	40 ML VOA	FT. STORY	NONE	SOIL
15 <b>A</b> 1	8-D-12	08/03/93	1155	1	40 ML VOA	FT. STORY	NONE	SOIL
16A1	7-E-48	08/03/93	1205	1	40 ML VOA	FT. STORY	none	SOIL
17 <b>A</b> 1	6-B-12	08/03/93	1210	1	40 ML VOA	FT. STORY	none	SOIL
18 <b>A</b> 1	6-F-12	08/03/93	1215	1	40 ML VOA	FT. STORY	none	SOIL
19A1 .	5-F-48	08/03/93	1220	1	40 ML VOA	FT. STORY	none	SOIL
20A1	4-A-S	08/03/93	1225	1	40 ML VOA	FT. STORY	NONE	SOIL
21 <b>A</b> 1	4-D-8	08/03/93	1230	1	40 ML VOA	FT. STORY	NONE	SOIL
22A1	4-D-12	08/03/93	1235	1	40 ML VOA	FT. STORY	none	SOIL
23A1	4-D-48	08/03/93	1240	1	40 ML VOA	FT. STORY	none	SOIL
24A1	3-C-S	08/03/93	1242	1	40 ML VOA	FT. STORY	none	SOIL
25 <b>A</b> 1	3-F-S	08/03/93	1245	1	40 ML VOA	FT. STORY	none	SOIL
26 <b>A</b> 1	3-A-24	08/03/93	1250	1	40 ML VOA	FT. STORY	none	SOIL
27A1	3-E-24	08/03/93	1255	1	40 ML VOA	FT. STORY	NONE	SOIL
28A1	2-A-S	08/03/93	1300	1	40 ML VOA	FT. STORY	NONE	SOIL
29A1	2-D-S	08/03/93	1303	1	40 ML VOA	FT. STORY	NONE	SOIL
30A1	1-A-S	08/03/93	1310	1	40 ML VOA	FT. STORY	NONE	SOIL
31A1	595	08/03/93	1205	ī	40 ML VOA	FT. STORY	NONE	SOIL
32 <b>A</b> 1	505	08/03/93	1310	ī	40 ML VOA	FT. STORY	NONE	SOIL

SAMPLE ID DUE DATE ANALYSIS TO BE PERFORMED

01A1>32A1

TPH 3550/8015

08/10/93

CONDITION OF SAMPLE: NOT PRESERVED

RECEIVED BY: JO ANN FEROLINO

RELINQUISHED BY: DOROTHY S. SMALL

814-B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-A GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: CLOSE OUT GRID

PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104,

1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215, 1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300, 1303, 1310, 1205, 1310

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR: UNITS:	12-A-24 01A1 08/03/93 08/03/93 08/04/93 08/06/93 HP/FID 0.25 mg/Kg	11-C-S 02A1 08/03/93 08/03/93 08/04/93 08/06/93 HP/FID 0.25 mg/Kg	11-E-S 03A1 08/03/93 08/03/93 08/04/93 08/05/93 HP/FID 0.25 mg/Kg	11-F-S 04A1 08/03/93 08/03/93 08/04/93 08/06/93 HP/FID 0.25 mg/Kg	11-B-24 05A1 08/03/93 08/03/93 08/04/93 08/06/93 HP/FID 0.25 mg/Kg
TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TYPE	N/A	N/A	N/A	N/A	N/A

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-A GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: CLOSE OUT GRID

PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104, 1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215, 1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300, 1303, 1310, 1205, 1310

CLIENT NO: LAB NO: SAMPLE DATE:	10-C-12 06A1 08/03/93	10-E-36 07A1 08/03/93	9-A-12 08A1 08/03/93	9-B-24 09A1 08/03/93	9-E-36 10A1 08/03/93	
RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR:	08/03/93 08/04/93 08/06/93 HP/FID 0.25	08/03/93 08/04/93 08/08/93 HP/FID 0.25	08/03/93 08/04/93 08/05/93 HP/FID 0.25	08/03/93 08/04/93 08/06/93 HP/FID 0.25	08/03/93 08/04/93 08/08/93 HP/FID 0.25	
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	
TOTAL PETROLEUM HYDROCARBONS	< 0.10		< 0.10	< 0.10		
DIESEL		1.44			3.69	
MOTOR OIL		36.7			14.4	
TYPE	N/A		N/A	N/A		

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-A GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: CLOSE OUT GRID

PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104, 1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215, 1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300, 1303, 1310, 1205, 1310

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR: UNITS: ANALYSIS	9-F-36 11A1 08/03/93 08/03/93 08/04/93 08/08/93 HP/FID 0.25 mg/Kg	8-A-S 12A1 08/03/93 08/03/93 08/04/93 08/06/93 HP/FID 0.25 mg/Kg	8-A-12 13A1 08/03/93 08/03/93 08/04/93 08/07/93 HP/FID 0.25 mg/Kg	8-B-12 14A1 08/03/93 08/03/93 08/04/93 08/07/93 HP/FID 0.25 mg/Kg	8-D-12 15A1 08/03/93 08/03/93 08/04/93 08/05/93 HP/FID 0.25 mg/Kg
TOTAL PETROLEUM HYDROCARBONS DIESEL	2.56	< 0.10		0.64	< 0.10
MOTOR OIL	86.8		16.3	21.5	
TYPE		N/A			N/A

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT\_OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-A GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: CLOSE OUT GRID

PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

1. 1. 1. 1. 1.

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104, 1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215, 1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300, 1303, 1310, 1205, 1310

CLIENT NO: LAB NO: SAMPLE DATE: RECEIVED DATE: DATE EXTRACTED: ANALYSIS DATE: INSTRUMENT ID: DILUTION FACTOR: UNITS: ANALYSIS	7-E-48 16A1 08/03/93 08/03/93 08/09/93 08/10/93 HP/FID 0.25 mg/Kg	6-B-12 17A1 08/03/93 08/03/93 08/09/93 08/10/93 HP/FID 0.25 mg/Kg	6-F-12 18A1 08/03/93 08/03/93 08/04/93 08/08/93 HP/FID 0.25 mg/Kg	5-F-48 19A1 08/03/93 08/03/93 08/04/93 08/07/93 HP/FID 0.25 mg/Kg	4-A-S 20A1 08/03/93 08/03/93 08/04/93 08/05/93 HP/FID 0.25 mg/Kg
TOTAL PETROLEUM HYDROCARBONS DIESEL	5.67	2.34	16.8	< 0.10	< 0.10
MOTOR OIL	62.8	32.5	DIESEL/M.OIL	N/A	N/A

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

# REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-A GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: CLOSE OUT GRID

PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104, 1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215, 1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300, 1303, 1310, 1205, 1310

# METHOD 3550 MODIFIED 8015

CLIENT NO:	4-D-S	4-D-12	4-D-48	3-c-s	3-F-S
LAB NO:	21A1	22A1	23A1	24A1	25 <b>A</b> 1
SAMPLE DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
DATE EXTRACTED:	08/04/93	08/04/93	08/04/93	08/04/93	08/04/93
ANALYSIS DATE:	08/06/93	08/07/93	08/05/93	08/05/93	08/05/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
		** *	= -	والمستراف المناف	
ANALYSIS					
		· · · · · · · · · · · · · · · · · · ·	i i i i i i i i i i i i i i i i i i i		
TOTAL PETROLEUM		2.1.2	1 2 12 2 1 1 -	<u>.</u>	
HYDROCARBONS	<del></del>	12.	< 0.10	< 0.10	< 0.10
DIESEL		8.63			
			* * * * * * * * * * * * * * * * * * *		
		the meaning	Service of the service of	10 mm	
MOTOR OIL	28.3	9.06		e de la companya del companya de la companya del companya de la co	
MOTOR OIL	28.3	9.06	N/A	n/A	n/A

PAGE 6 OF 8

814-B GREENBRIER CIRCLE CHESAPEARE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-A GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: CLOSE OUT GRID

PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104, 1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215, 1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300, 1205

1303, 1310, 1205, 1310

#### METHOD 3550 MODIFIED 8015

	* * * * * * * * * * * * * * * * * * * *			
3-A-24	3-E-24	2-A-S	2-D-S	1-A-S
26A1	27A1	28A1	29A1	30A1
08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
08/09/93	08/09/93	08/04/93	08/09/93	08/04/93
08/11/93	08/10/93	08/05/93	08/11/93	08/05/93
HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
0.25	0.25	0.25	0.25	0.25
mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
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		:		
	26A1 08/03/93 08/03/93 08/09/93 08/11/93 HP/FID 0.25	26A1 27A1 08/03/93 08/03/93 08/03/93 08/03/93 08/09/93 08/09/93 08/11/93 08/10/93 HP/FID HP/FID 0.25 0.25	26A1 27A1 28A1 08/03/93 08/03/93 08/03/93 08/03/93 08/03/93 08/03/93 08/09/93 08/09/93 08/04/93 08/11/93 08/10/93 08/05/93 HP/FID HP/FID HP/FID 0.25 0.25 0.25	26A1 27A1 28A1 29A1 08/03/93 08/03/93 08/03/93 08/03/93 08/03/93 08/03/93 08/03/93 08/03/93 08/09/93 08/09/93 08/04/93 08/09/93 08/11/93 08/10/93 08/05/93 08/11/93 HP/FID HP/FID HP/FID HP/FID 0.25 0.25 0.25 0.25

TOTAL PETROLEUM

**HYDROCARBONS** < 0.10 22.7

DIESEL 121 57.4

MOTOR OIL 3.85 42.9

TYPE N/A DIESEL/M.OIL

PAGE 7 OF 8

814-B GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (T) (804) 420-0467 (F) (804) 420-4204

#### REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC. 814-A GREENBRIER CIRCLE CHESAPEAKE, VA 23320 (804) 420-0467

PROJECT NAME: CLOSE OUT GRID

PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104, 1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215, 1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300, 1303, 1310, 1205, 1310

#### METHOD 3550 MODIFIED 8015

CLIENT NO:	595	505
LAB NO:	31A1 "	32A1
SAMPLE DATE:	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93
DATE EXTRACTED:	08/09/93	08/04/93
ANALYSIS DATE:	08/10/93	08/05/93
INSTRUMENT ID:	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25
UNITS:	mg/Kg	mg/Kg

#### ANALYSIS

TOTAL PETROLEUM HYDROCARBONS

< 0.10

DIESEL

4.37

MOTOR OIL

41.6

TYPE

N/A

REVIEWED BY:

DOROTHY S. SMALL

PAGE 8 OF 8

SOLUTION OG #.  0803 1793 - 003  COMPANY NAME:	Solutions Laboratories, Inc. 814-B Greenbrier Circle Chesapeake, VA 23320	CHAIN-OF-CUSTODY RECORL AND ANALYSIS REQUEST Page 104 4
Sol ENVIR ASSO. INC.	(804) 420-0467/Fax 420-4204	ANALYSIS REQUEST
Sol Endir Asso. Tax. PROJECT MANAGER:	PHONE: P.O#	
AL Pavis	430-0467	
ADDRESS (Office)	SITE LOCATION:	
814-B GREWBRIER CIR Chas	VA FT. Story	18.1 [ 18.1 [ NOA VOA
PROJECT NUMBER:	PROJECT NAME:	
	Close Dut Coxid	
	edures were used during the collection of these	
samples. Sampler's Signature:	Joseph Samale	
	AATRIX PRESERVATION SAMPLING	
	Air Sludge Liquid Other HCI HNO3 H2SO4 NaOH Ice None Other Date	Oil & Grease 50 BTEX only 602 BTEX only 602 EPA 602   8 EPA 601   8 EPA 601   8 EPA 601   8 COT   Metals   COT   Metals   COT   Flash   Phenols   Cy Ammonia   7 BOD   COD
12-A-24 61 1 40 mL VA L	8/3/42 1035	
11-c-s 02 1 1	. / 640	
11-E-S 03	1043	
11-E-S 04 1	1045	
11-8-24 05 1		
10-c-12	1055	
10-E-3- 01 4 9-A-12 08	1100	
9-A-12 08 1 4 9-B-24 09 1	1104	
7E-34 10 V	1128	
RELINQUISHED BY SAMPLER: DATE		REMARKS/SPECIAL-DETECTION LIMITS:
Darot In Small		
RELINQUISHED BY: DATE	: TIME: RECEIVED BY:	
		SPECIAL REPORT REQUIREMENTS:
RELINQUISHED BY: DATE & 3		FAX
CONTAINER TYPE KEY: GL=GLASS AM VOA= VOLATILE ORGANIC CONTAINER		CIAL HANDLING: EXPEDITED 72 HR  48 HR  24 HR 12 HR  12 HR  8 HR  4 HR  HR

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! 	SAMPLE		# Containers	Container Size/Type	Water	Soil	Air	Sludge	Other	HCI	HN03	H2SO4	NaOH	None	Other	Date	Time	трн сс	Oil & Gr	BTEX only 602 □	<b>EPA</b> 602 □	EPA 601	EPA 608 □	EPA 615 □	TCLP Metals	Silver	Lead FLAA	Соп	Phenols	Ammonia	BOD					
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**CHAIN-OF-CUSTODY RECORDS** 



# ANALYSIS REGJEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 440165

Profit Center N Project Manag Purchase Order N	.4	 Proje	Lab	Contact t/Phone	9 VERON 12 412 -	ORT PA VICA BARTOT 392-770) Report to CORP	MONROEVILIE  10 TOM MATHISO  IT CORP  2790 Masside	PA 15146
Required Report Da		16				PER LINE	Morkosville F	A 15146
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container Type	Volume	servative	Requested Testing <sup>20</sup> Program	Condition on 21 Receipt	Disposal <sup>2</sup> Record No.
19029-5001	SOIL	1-21-93	GLASS	1-25 ans	NONE	TOLP LEAD	OK	
19029-5002	1		1		L		FUR	1.18
19029-5003				1			U JE U	
19029-WOO/	LIQUID		LASS	Tool	NONE	PEST/PEB BNA		
			MASTIC	Y-LITER	ION NA OH	CYANIDE	EAR	A B
			1		HN03	METALS	IGE	
			GLASS	500ML	HN03	MERCURY		
	*		1	2-40/1	HCL	VOA		
Special Instruction	ns: <sup>23</sup>					•	•	
ossible Hazard lo Non-hazard  Fla Turnaround Time	ammable 🛄 🛮 Skin Irr	tant 📮 Po	ison B 🛄	Unknowr		Sample Disposal: <sup>25</sup> Return to Client 📴 💮 Dispo	osal by Lab 🔏 🛚 Archi	/e(mc
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Project Name/	No. 1 1th Story	Samp	les Shipm	nent Date	7 10/13	/93 Bil	10:5 TT C	orp .	01
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Profit Center	No. 3 351/				9 KAL			of ville Pr	
Project Mana	ager 4 Tom Mathis	Proje مرح	ct Contac	t/Phone	12 Ton	Mathisen Report	to: 10 Ton	Mathi	SON
Purchase Order		<u> </u>	Carrier/W	/aybill No.	13		1-8	00-444	959b
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Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected	Container <sup>1</sup> Type	<sup>7</sup> Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Rece	ion on <sup>21</sup>	Disposal <sup>22</sup> Record No.
E-15-477	SAND/soil	10/13	25006	Soil	Nore	Kerosine	Rec 400 )	53 1'c	GILC
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E-7-469		1155		1					
C-6-426		1200				$\frac{1}{2}$	₩	1	<u> </u>
Special Instruction	ons: <sup>23</sup>		*.: ν: Φν :						
Possible Hazard Non-hazard 🔲 🕒 F		tant 🛄 🏻 Pois	son B 📮	Únknowi	n 🛄 🔝	Sample Disposal: <sup>25</sup> Return to Client 🖳 🔻 Dia	sposal by Lab	Archive	e (mos.)
Turnaround Time			Q( ).[	C Level: <sup>2</sup>	7 ∴ jn. <b>□</b>	Project Specific (specify	):		, Cal
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# ANALYSIS RECJEST AND CHAIN OF CUSTODY RECORD (cont.)\*

B310/67
Reference Document No.3443619
Page 1 of >2

Project No		
Project No	•	

Samples Shipment Date 1911 93

	No. 10 Property of the Control of th		ONE	CONT	AINER	PER LINE		
Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	-Type	Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
EC4540229	Sandpaidic	19673	Cleater agazet	SAND	Negens		14 12 14-53	
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# ANALYSIS REGEST AND CHAIN OF CUSTODY RECORD\*

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	Reference Document No.	11851	7
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Project Name/	No. 1 Ft. Story pers 2 Randy Hoo	Sam	ples Shipm Lab De	ent Date	7 10 13/0 8 DUST	Div, Texas	ill to: 5 IT Corp 2790 Masside Moneuvillo d Attu: Jon	Blvd.
	No. 3 3511	e e	Lat	Contact	9	12 17 6275	MONEUVILLO F	nath/sau
Project Man	ager 4 Tom Mathi	SW Proi	ect Contac	t/Phone	12		t to: 10 Tom Math	
Purchase Order	_		Carrier/W	avbill No.	13	Hepon	TT COMP	3 0 11
equired Report (	Date 11 10 15/93					PER LINE	/ · · · · · · · · · · · · · · · · · · ·	
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected		Sample 18			Receipt	Disposal <sup>22</sup> Record No.
E-16-352	SAND / Soil	0830	Clear 250ml	Filled	Nove	Kerosina	Regood, 1°C See RUN 10-14 XZ	
1-16-310		10/13	2500	SAND	Want-		LFOF	AB
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-10-304		0 1000			1			·
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pecial Instruction	ons: <sup>23</sup>			· .	िल		· · · · · · · · · · · · · · · · · · ·	
	Identification: 24 Flammable 📮 Skin In	ritant 🔲 Po	ison B 📮	Unknow	n 🝱	Sample Disposal: <sup>25</sup> Return to Client 🖳 🌐 D	isposal by Lab 🔼 🛚 Archiv	/e (mo:
urnaround Time Iormal 🖳 Rush			Q( 1.[_	C Level: 2	7. 	Project Specific (specifi	y):	
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ANALYSIS RE-JEST AND CHAIN OF CUSTODY RECORD (cont.)\*

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Reference Document No.3. Page of	41	65	13

Project No.

Samples Shipment Date 10/17/93

Sedimus Sedimu			ONE	CONTA	INER	PER LINE	0167	10/4/13
Sample 4 S	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
C-5-2293	Mary Care and Care an	10/12	250nc	Soil	Wons	Kersing	14. 900 J See KUR	
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# ANALYSIS RELEST AND CHAIN OF CUSTODY RECORD\*

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Project Name/	No. 1 Fort Story	519028am	pies Shipn	nent Date	7 3-	22.94	Bill to	o:5 Tom 1	Nath isc	ร์ก	
Sample Team Memb	ers 2 De marco/T	Bernardo	Lab D	estination	8 11	Exort		IT Co	rρ		
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Project Mons	20014-To M-11				المالك ب سروا	M. U	<b>-</b>	monroevil	u va	15046	
Project iviana	ager <sup>4</sup> Tom Math	ILSOM Proje	ect Contac	ct/Pnone	lom	Mathison (412) Ag	ort to	10 Tom	nathiso	n	
Purchase Order	100. 519029		Carrier/V	Vaybill No.	13 97	10126193		IT C	sco :		
Required Report D	Date 11 N TAT		ONE	CONT	VIVE	R PER LINE		Monioevi			<u> </u>
Sample <sup>14</sup>	Sample <sup>15</sup>	Date/Time 16					20				
Number	Description/Type	Collected	Type	Volume	servative	9 Requested Testir Program	<b>19</b> <sup>20</sup>	Condition o Receipt	n 21	Disposal Record No	22
		3-22.94	amber	(3)	ice					1100012 18	-
01A-032291	501	8:00	ahas_	60ml	40	8015					
01A-032294	Soil	3-22-94	amber	250ml	iæ	181			iff L	AB	i
		3-22-94	amber -		ice			<del>US</del>	E OI	WLV-	
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430-032294	soil 9	3-27-94	amber class	250ml	100	418.1		•	. [		
1	Sec. 2015	3-22-94	anber	3)	ice		,			<del></del>	
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95E-032294	Soil	8-22.94	amber	250 m	ice	418.1	ľ				-
1			amber	(3)	F		$\overline{}$	<del>- UD</del>	<del>- U</del>	WI.Y	
40B-032294	SOIL PLEASE	ව 30	aviss	lant	100	8015	.,				
403-032294	Soil in the second	3-7294 8:30	amber	250m)	ice	4181	*.				
Special Instructio	ns: 23	de la la la la la la la la la la la la la					· ·				—
Possible Hazard I			<u> </u>		7. W	Sample Disposal: 2	25		<del></del>	<del></del>	
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Turnaround Time			Q	C Level: 2	7 a -	:					
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# ANALYSIS REGUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.30 <u>+53294</u> Page <u>2</u> of <u>2</u>

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3/22794

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Sample 14 Number	Sample 15 1. Description/Type	Date/Time <sup>16</sup> Collected	Туре	Volume	servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
124F-032294	Soil	3-22.94	01955	(3) 60ml	100	8015	•	
124F-032294	Soils 683	3-22-94	amber alask	250ml	ice	418.1	GC E	AB
BJD-035394	Sent of the sent o	D:50	amber glass	60m	100	8015	USE	JMLY
82D-032294	Martia Martia Buttar Butar eltere norus	3-22.94	amber glass	(120ml	ice 40	418.1		
【歌】 扩放 【	· 新 · · · · · · · · · · · · · · · · · ·	3-22.94 9:10.	amber	(3) 40ml	100	8015		
82DDUP-03-229		3-22-94	amber alask	250ml	ice	416.1		The state of the s
124F-032294	SOLVE SOLVE	3-22-94	arhiber	(3)	Tice	9015		
1245-032294	YaiD	3-22-94	al 35	3000	ice	118.1	USE	DNLY
05A-032294	2 2 2 2 2 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5	3:32:4 9:30	amer alaks	oml	ice 40	දිග15		
U5A-032294	56.13	3-22-9	alass	250ml	ice yo	418.1		
470-032294	2017 1017 1017 1018 1018 1018	3.22.94		(3) 60ml	140	8015		and the second
47C-032594	€ மி. ி. இ. இ.	3-22.94		250ml	1 (Q	418.1	E.O	1./33
VOID	501 5 0 6 2		amber	(3)	ice	8015		
VOID	Soil # 55 5		amber glass	250ml	i Ce	माछ।		
VoiD	401		amber glass	(3)	i Ce	8015		
VOID	501 6		amber	250ml	I Ce	418.1	Total Cons	
voiD	50d 97 # 9			(3)	140	8015	FOR	
diay	Soil 2		amber 91035	250ml	100	पार्ठा	USE	JULY
VOID	9 6 5 501 2 8			(3)	100 0	8015	300° 40°	An ordered described Mills
voin	Soil		amber 21955	250ml	100	418.		



# ANALYSIS RECEST AND CHAIN OF CUSTODY RECORD\*

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Page 1 of	1		7 1	•	J	J	۷.

CORPORA	110N - 5	19029					· · · · · · · · · · · · · · · · · · ·	
Project Name/I	Vo. 1-Fort Story	Samp	ples Shipm	nent Date	7 3-	32-94 Bill to	0:5 Tom Mathison	IT-Corp
ample Team Memb	ers 2 De Marco / Ber	mordo	Lab D	estination	8 MR	D lab	2790 Mosside Monroeville P	BIVD
Profit Center I	No. 3 3511		Lal	b Contact	9			- 15 146
Project Mana	ger 4 Tom Mathis	on Proje	ect Contac	ct/Phone	19. mat	hison (412) 372-7701 Report to	.10 Tom Mathison	
Purchase Order	No. 6 519029		Carrier /W	Vavbill No.	13 9/0	76951972	IT Corp	<u> </u>
Required Report D				<u>.</u>			2790 Mosside	Blud
·		·				PER LINE	Monsoeville PA	15/4/6
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected	Туре	Volume	servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
082D-032294	Soil	3-22-94	anber 91855	(3) (0 m)	40	8015		
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30D-032274	501	3-2 -94	mbur 1955	# Jom!	ia 40	418.1		
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		1		<u>.                                    </u>			lige o	WIV
		**************************************	·					
Special Instructio	ns: <sup>23</sup>		<del>-</del>					
Possible Hazard I Non-hazard 🔼 Fl	dentification: 24	itant 🖳 Poi	son B 🖳	Unknowr	, <b>_</b>	Sample Disposal: <sup>25</sup> Return to Client Dispo	osal by Lab 🕍 🛚 Archive	(mos.)
Turnaround Time Normal 🔊 Rush	Required: <sup>26</sup>	,	Q( 1.1	C Level: <sup>2</sup>		Project Specific (specify):		
1. Relinquished by [Signature/Affiliation]	28 Jamo Berry	Dat Tim		94	1. Rece	ived by 28 Affiliation)	Date:_ Time:	
2. Relinquished by (Signature/Affiliation)		Dat Tim			2. Rece	ived by Affiliation)	Date: Time:	,
3. Relinquished by (Signature/Affiliation)		Dat Tim		·	3. Rece (Signature/		Date: Time:	
Comments: 29		:						<del></del>

MCA 3/15/91



Reference Document No. 113603
Page 1 of 2

	No. 177. Story 51						Bill to:	Tom Ma		<u> </u>
ample Team Memb	ers 2 De Marco / Be	rnardo	Lab De	estination	8 TT	Export	- -	2790	p mosside	Rlvd
Profit Center	No. 3 3511		Lat	o Contact	9 Carris	2 Smith	<u>-</u>	Manney	6 Pa	15146
Project Mana	iger 4 T. Mathison	Proj	ect Contac	t/Phone	17. mat	hison (HI2) 372. Re	7701	Tom M	10-11-50-	•
Purchase Order	No.6 519029		Carrier/W	/avbill No.	1397 M	12(1)93	port to: 1	TT Cor	0	J
Required Report D		:						2790 r		
	<u> </u>	***************************************				PER LINE		Marroevi	16 Pa	15146
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 10	Container <sup>1</sup> Type	Volume	Pre- 19 servative	Requested Testi Program	ng <sup>20</sup>	Condition of Receipt	n <sup>21</sup>	Disposal <sup>22</sup> Record No.
3 <b>5</b> 8-032294	501)	10:05	amber	(3)	ice 40	8015				-
3 <b>56</b> -03-2294	soil	10:05	alass ambir	250ml	100	₩8.1		FO	R	AB
721)-032294	Soil	11:05	amber	60	100	2015		US		WLY
720-032294	Soil	11:0 3-22 94	chbir	SOM	10 40	H18.1		<u></u>		
99E-032294	<b>50</b> i	3-55-67	amber lass	13) 60ml		8015				AF
99E-032294	Soil	11.45	ambur	250m	ice 40	418.1				MIV.
10A -0322-94	501	10 25 3-22.94 10:25	amber Glass	(3)	ice yo	8015				
10A -03\$594	501	3.22.94	amber,	a50ml	ia 40	418.1				
Special Instructio	ns: <sup>23</sup>									
Possible Hazard I Non-hazard 🖾 🛚 Fl		ritant 🖳 Po	ison B 📮	Unknow	n 📮	Sample Disposal: Return to Client	25 Disposa	ol by Lab ⊠	Archive	(mos
Turnaround Time Normal 🔼 Rush	Required: 26		QC I.	C Level: 2	7 - III. 🖵	Project Specific (sp	ecify):			-
1. Relinquished by (Signature/Affiliation)			:e: <u>3/22/</u> 1e: 4,32	cy	<del>,                                     </del>	ived by 28			Date:_ Time:	v
2. Relinquished by (Signature/Affiliation)		Da <sup>r</sup> Tin	:e:		2. Rece	ived by			Date:_ Time:	
3. Relinquished by (Signature/Affiliation)		) Dat	:e:		3. Recei	ved by			Date:_ Time:	
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### ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.30 <u>413603</u> Page <u>2</u> of <u>2</u>

Project No.519 029

Samples Shipment Date 3-22-94

	1 2		ONE	CONTA	INER	PER LINE	, ,	4
Sample 14 Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Turne	Volume	corrective	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
19F-032294	5011 67 5	13-22-94	ambur alass	(3) Com/	ice 40	<del>ಜ</del> ಾ		
19F-032294	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	10:45	amber glass	250ml	ice 40	418.)		
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Reference	Document No.	453295
Page 1 of	<b>,</b>	

Project Name/No. 1	CORPORA	TION :	UNAI	IN OL CI	D9 I OF	JY KE	GURD"	Page 1	or <u>~</u>	121
Earning   Tearn Members   Demarco   Retriardo   Profit Center No. 3   35     Lab Destination   8 TT   Export   Type   Profit Center No. 3   35     Lab Contact   Carrier   Smrith   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Contact/Phone   Project Condition on 21   Project Phone   Project Condition on 21   Project Phone   Project Condition on 21   Project Phone   Project Ph	Project Name/	No. 1 Fl. Story 5	19029 Sampl	es Shipmer	nt Date	7, 3-,	2 <i>2-94</i>	Bill to:5	Tom Mathis	<b>∞</b> ∩
Profit Center No. 3 3511  Lab Contact S Carrie Smith Interval 1 A 1514/4  Project Manager Tom Mathison Project Contact/Phone Tom Mathison Project Contact/Phone Tom Mathison Project Contact/Phone Tom Mathison Project Contact/Phone Tom Mathison Project Contact/Phone Tom Mathison Project Contact/Phone Tom Mathison Project Contact/Phone Tom Mathison Project Contact Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Tom Mathison Project Phone Project Phone Project Phone Project Phone Project Phone Project Phone Project Phone Project Phone Project Phone Proj	Sample Team Memb	pers 2 De Marco / Be	tnardo :	Lab Desi	tination	8-7-7	Export	<u>-</u>	IT Corp	No.
Project Manager *Ton Mothison Purchase Order No. 6 519029 Purchase Order No. 6 519029 Required Report Date **  ONE CONTAINER PER LINE  Sample 14 Number  Bample 15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Collected  12:15 Description/Type  Condition on 21 Received Testing 20 Condition on 21 Received Program  Condition on 21 Received Program  Condition on 21 Received Description/Type Requested Testing 20 Condition on 21 Received Description/Type  Condition on 21 Received Description/Type  Condition on 21 Received Description	Described and	1 3 2011				d 0		2	790 Mossic	Le Blvd.
Required Report Data   1	Project Men	4To M 11		Lau C	-OHUBCL	100 n	2 2 NN 17h (412)	11	ionroeville +	k 15146
Required Report Data   1	Project Ivian	ager iom illatin	1200 Projec	ct Contact/	/Phone	relon IV	Nothison 372-7 Rep	ort to: 18	om Mathisa	20
Sample 14   Description/Type   Collected   Contained   Program	i di ciidae ci dei	140. 21 1087	C	arrier/Way	ybill No	13	, y , y , y , y , y , y , y , y , y , y		-1	
Sample 14   Description/Type   Detc/Time 16   Container 18   Sample 18   Pre- 19   Requested Testing 20   Condition on 21   Disposel 22   Record No.	Required Report D	Date 11		ONEC	ONTA	VINER	DER LINE	$\frac{1}{m}$	6000 Mossid	BIVA
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Special Instructions: 23   Special Instructions: 23   Special Instructions: 23   Special Instructions: 24   Shormal   Special Instructions: 25   Special Instructions: 26   Skin Irritant   Poison B   Unknown   Sample Disposal: 25   Return to Client   Disposal by Lab   Archive   Imme:   Archive   Imme:   Signeture/Affliction   Signeture/Affli	67D-032294	soil .	3-99-01	ylass T	40n	40	<b>/</b>		USE	MLA
258-03294 501 3-3294 (ass   Com   49   Cols    258-03294 501 3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   3-3294   Cols    258-03294 501   Cols    268-03294 501   Cols    278-03294 501   Cols    288-03294 501   Cols    298-03294 502   Cols    298-03294 502   Cols    298-03294 502   Cols    298-03294 502   Cols    298-03	6712-032294	Soi	3-22 94 8	G55		'uo'	118.1		• *	
25.6 - 032294 501 3-2294 9kss 3-22-94 9kss 3	258-032294	soil	3-22-4	ass P		ुपुठ	හ015			AB
Special Instructions: 23  Possible Hazard Identification: 24 Non-hazard Flammable Skin Irritant Poison B Unknown Facture to Client Disposal: 25 Normal Required: 26 Normal Required: 26 Normal Rush Date: 2/22/gu Time: 4/7 Isigneture/Affiliation Time: Signeture/Affiliation Signeture/Affiliation Time: Signeture/Affiliation Sig	25B-032294	Soil	3-22-94 6	alass e	250ml	40	418.[	<u>.                                    </u>	USEC	
Special Instructions: 23  Possible Hazard Identification: 24 Non-hazard Flammable Skin Irritant Poison B Unknown Return to Client Disposal: 25 Return to Client Disposal by Lab Archive (mos.)  Turnaround Time Required: 26 Normal Rush Rush Date: 1.2 1/2 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 28 (Signature/Affiliation) Rush Date: 1. Received by 1. Received	64D -032294	50il	3-22-94 0	akss (	Loni	40	8015			
Possible Hazard Identification: 24 Non-hazard Flammable Skin Irritant Poison B Unknown Return to Client Disposal by Lab Archive (mos.)  Turnaround Time Required: 26 Normal Rush Rush Rush Rush Rush Rush Rush Rush	64D-032294	soil	/ • • • • • • • • • • • • • • • • •	i I	250ml		418.1			
Non-hazard Skin Irritant Poison B Unknown Return to Client Disposal by Lab Archive [mos.]  Turnaround Time Required: 26 Normal Rush Date: 2/2/Gu Time: 4/7 Signature/Affiliation)  Date: 2/2/Gu Time: 4/7 Signature/Affiliation)  Date: 3. Received by Signature/Affiliation)  Skin Irritant Poison B Unknown Return to Client Disposal by Lab Archive [mos.]  Archive [mos.]  Archive [mos.]  Archive [mos.]  Archive [mos.]  Archive [mos.]  Archive [mos.]	Special Instruction	ons: <sup>23</sup>			6					
Turnaround Time Required: 26 Normal Rush   Odos   I.   II.   Project Specific (specify):  1. Relinquished by 28 (Signature/Affiliation)   Odos   Date: 7/2 / Gu   Time: 4/3   Signature/Affiliation)   Time: 1/3   Signature/Affiliation   Date: 7/4   Signature/Affiliation   Time: 1/4   Signature/Affiliation   Time: 1/4   Signature/Affiliation   Time: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Time: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Date: 1/4   Signature/Affiliation   Signature/Affiliation   Date: 1/4   Signature/Affiliation	Non-hazard 🖄 🕒 F	lammable 🖳 🏻 Skin Irri	tant 🖳 Poisc	n B 💷 🏻 L	Jnknown	, <b>.</b>			y Lab 🔼 🛚 Archi	ve (mos.)
2. Relinquished by (Signeture/Affiliation)  Date: 2. Received by (Signeture/Affiliation)  Time: 2. Received by (Signeture/Affiliation)  Time: 3. Received by (Signeture/Affiliation)  Time: Time	Normal 🔼 Rush	1 0da	<b>J</b> S				Project Specific (spec	cify):		
(Signeture/Affiliation)     Time:     (Signeture/Affiliation)     Time:       3. Relinquished by (Signeture/Affiliation)     Date: Time:     3. Received by (Signeture/Affiliation)     Date: Time:		your paren	Date: Time:	3/22/94		1. Recei (Signature/A	ved by 28 ffiliation)			
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#### ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.30 153 295. Page 2 of 3

Project Name Fort Story Project No. 519029

Samples Shipment Date

\$ B & 1	A B E S S S		ONE	CONT	AINER	PER LINE		a forest and a second
Sample 14 Number	Sample 15 Description/Type.	Date/Time <sup>16</sup> Collected .	Туре	Volume	servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
228.032294	Soil Sea Sea	3-22.94	amber Glass	(3) 60 ml	40	8015		
<del>03</del> 228-03229	Social actions of the property	3-22-94	amber alass	250 M	iceyo	418.1	<b>-</b> 00	
52(-035294	Person	10:35		(E)	انعره	9015	USE	ONLY
52C-032294	Policina Buttery Batta Batta Ronde	3-25-94	amber algss	250 m	ice 40	418.1		
106F-035294		12:25		(3) 60ml	1ce	8015		
106F-032a94		12:25		290	ia 40	418.1		
104E-032294	2 4 6 5 5	3-22.94	amber	(3)	14	1015	FOR	
104E-032294	0 8 0 8 2	11:55	anber allss	50m	ice 40	418.1	USE	
1094-032294		3-22-91	amber aleks	(S)	ice yo	8015		
109F-032294		12:10	Aug Ler	250ml	ice 40	418.1		
	Soil and a win	22 19	amber ghiss	(3) 60ml	16 40	8015		
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				(3)	ice yo	8015		
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		-	amber	250ml	ice	418-1		
	501		alass amber	100ml	TCQ TCQ	8015		
			alass	250ml	160	418.1		e de la companya de l
	soil = 13		glass amber	lan	ice ,	9015	-05	
<b>—</b>	soil			250ml 3)	40	418.1		The local distriction of the local distriction
	soil B		amber	aml	49	8015		
	soil E			550ml	10 4°	418.1		



Reference Document Nu 417553
Page 1 of

MCA 3/15/91

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	No. 1 Fort Story 510		oles Shipm	ent Date	73-2	2-94 Bill	to: 5 Tom Mathis	00 ~
ample Team Memb	oers 2 De Marco/Bl	rnardo.	Lab De	estination	8IT	Export	IT Corp	01.1
Profit Center	No. 3 3511		Lat	b Contact	9 Call	ie Smith	2790 Mosside Monioeville Pa	15146
Project Mana	ager 4 Tom Mathi	son Proje	ect Contac	t/Phone	121 Ma	thison (412) 372-770 Report	1 10 Ton M.4.	-
Purchase Order	No. 6 5 19029		Carrier /W	/avbill No	13 9710	126193 Heport 1	TT COLD	27
Required Report D							2790 Mossic	
<del></del>	T					PER LINE	Monroevilly of	a 15146
Semple <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected	Container Type	Volume	servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
15A-032294	501	3-22-94	ambur Glass	(3)	40	8015		
15A-032294	501	3-22-94	amber alass	250m	100	48.1	FUR	
576-032294	SOIL	3-22.91	a'mbir glass	60m	164	5015	USE U	MLY
57C-032294	soil	11:3 3-22 94	ass ass	S JO M		118.1		
770-032294	Soil	10:10 10:10	anber	3) Wml	1 Ce 40	8015		A CO
77D-032294	5011	3-22.94	amber	250m		418.1	<u>Luceo</u>	MIV
62C-032294	soil	3-22-94	olmber Glass Jumber	(3) 60ml	140	<b>8015</b>		
bac-032294	soil	3-22-94	glass	250m)	140	418.1		
Special Instruction	ons: <sup>23</sup>	, , , , , , , , , , , , , , , , , , ,		1	:			
Possible Hazard Non-hazard		itant 📮 Pois	son B 🖳	Unknowi		Sample Disposal: <sup>25</sup> Return to Client  Disp	posal by Lab	/e(mos.)
Turnaround Time Normal 🕮 Rush	Required: <sup>26</sup>		Q0 1	C Level: <sup>2</sup>	7    . <b></b>	Project Specific (specify):		
1. Relinquished by (Signature/Affiliation)	28 Jenson	Deta Time			1. Rece (Signature/A	ived by 28 ffiliation)	Date Time	
2. Relinquished by (Signature/Affiliation)	<del>, 0.0-</del>	Date Time	e:	· ***	2. Rece	ved by (filiation)	Date: Time	
3. Relinquished by (Signature/Affiliation)		Date Time	e:		3. Rece (Signature/A	ived by	Date: Time:	
Comments: 29		<del>- , , , . , .</del>						١.
		-						



Project Name Fort Story

#### ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 519029

Reference Document No.30 417 553
Page 2 of 2

Samples Shipment Date 3-22-94

Liplectivette TT		Project iv	0. 217027	Sample	s Snipment Date	3-22-74
	5 7 6 1		CONTAINER	PER LINE		. m/ss
Sample 14 Number	Sample 15 - Description/Type	Date/Time 16 Collected Type	Volume servative	Program	Condition on 21 Receipt	Disposal 22 Record No.
0BDUP032294	501 60	10:55 amber 3-2294 alass	(3) 1Ce 40	8015	· ·	·
BDUP 032394	$\sim$ $\omega = \omega = \omega$	10:55 amber 3-22-94 glass	250ml 10 46	418.1	FOR	LAB
4F-032294	Property of the pa	11:15 amber 3-22-94 alass	(3) 100 4°		USE	
4F-032294	Trong State of the state of the	11:15 amber 3-22-94 alcss	250ml 1ce 40			
3013-032294 RTVP1-3-2094	5.581	10:55 amber 3-22-94 obss	(3) (60) m) ice 40			
30B-032294	Solutions at the second	10:55 ambr 3-22-94 alass	250ml 10 40			3MLY
1E-032294	50   5 m	10:45 ambic	(3)	<b>#</b> '	FOR	
4E-032294	Dog of the control o	3-22-94 glass	50m 10 40			BULY
9E -032294	501 P	9:55 am ser	Conlice 40	8015		
9E032294		9:55 a ber	250ml ia 4°	1		
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Reference Document No Page 1 of 1	413609
Bill to: 5 Tom Mathison  TT Carp  A790 Mosside 7	White

Profit Center Project Mane	ers <sup>2</sup> Demarco / B No. <sup>3</sup> 3511 ager tom Mathis No. <sup>6</sup> 519029	on Proje	Latect Contac	Contact	9 12. Matt	vison (412)37 2-7701 Report to	J. I Corp	15146 1
Required Report D	Sample <sup>15</sup>	Date/Time <sup>16</sup>	Container <sup>1</sup>	<sup>7</sup> Sample <sup>18</sup>	<b>Pro.</b> 19	PER LINE Requested Testing 20	Monroeville Pa	15146 Disposal 22
Number 322D-032394	Description/Type  ≤o	10:30 3-23-94	umber Class	Volume	servative (C	Program	Receipt	Record No.
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<del>"</del>			V. 9 :		di di		EOBI	
			<b>№</b> 1		110		USEO	WLY
<u> </u>				<u> </u>				

Special Instructions: <sup>23</sup>		70	
Possible Hazard Identification: 24 Non-hazard  Flammable  Skin Irritant		Sample Disposal: <sup>25</sup>	Archive (mos.)
Turnaround Time Required: <sup>26</sup> Normak Rush Rush	GC Level: 2	7 III. Project Specific (specify):	
1. Relinquished by <sup>28</sup> (Signature/Affiliation)	Date: <u>3/25/94/</u> Time: 4/30	1. Received by <sup>28</sup> (Signature/Affiliation)	Date: Time:
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:
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Project Name/I	No. 1 Fort Story 5					<b>(</b> 7 19 1 3 5 12 18 19 11 11 11 11 11 11 11 11 11 11 11 11		<u>-</u> :
ample Team Memb	ers 2 Damarco	Burnado	Lab De	estination	8 MRT		to: Jon Mathis IT Corp 2790 Mosside Monroeville Pa	<b>×</b> 7
Profit Center I	No. 3 2511		Lat	Contact	9 : 7		Massaulle Me	Blud
Project iviana	ger Tom Math	Proje	ct Contac	t/Pnone	-71 Ma	Lhosen H	to: 10 Tom Mathison	13196
Purchase Order	No. 6 519009	È	arrier/W	aybill No	13 071	Δ126515	TT Corn	ann. Ay
Required Report D	No. 6 519009 ete 11 17 47		ONE	CONT	AINED	PER LINE	IT Corp 270 mosside Blv	d
Sample <sup>14</sup>	Sample 15	Date/Time 16	Container <sup>1</sup>	Sample 18	<b>pre</b> . 19	Requested Testing 20	11 barosy, le Pa	Disposal 22
Number	Description/Type	Collected	Туре	Volume	servativé	Program	Receipt	Record No.
290B-032394	50.1	3-22-04	anker abse	(3)	الع	<b>2015</b>		
290 B-032394	<b>5.</b> L	2:33 GU	amber	S€\ml	100	<b>1</b> 18.1	FUR L	AB
2856-032394			7000		ia u		USE O	NLY
285B 732394	60	9: 0 3-7: 94	mbir	) FOrm	ia		**************************************	
			.3 <u>1</u> 20 750		3 an J			
		40 P. C. C. C. C. C. C. C. C. C. C. C. C. C.		1 1			lice	
<b>.5</b>				0 4 5				
Special Instruction	ns: <sup>23</sup>							
Possible Hazard Non-hazard	dentification: 24	tant 🛄 Pois	on B 🖳	Unkflow	¬ □	Sample Disposal: <sup>25</sup> Return to Client Dis	sposal by Lab 🌠 🛚 Archive	(moal)
Turnaround Time Normal 🛕 Rush			QC I.	C Level: <sup>2</sup>	7 ∭. <b>∐</b>	Project Specific (specify)		*
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Comments: 29	<u> </u>							



Reference Document N 413608 Page 1 of 2

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mple Team Memb	No. Fort Story 5 ers 2 De Marco 18	ernardo	Lab D	estination	8TT	Export		Tom Mathison	N The state of the
Profit Center I						Smith	<b>.</b>	2790 Mosside Monroeville Pa	15146
Project Mana	gertom Mathis	OO Proi						totom Mathison	-
Purchase Order			Carrier /W	/avhill No	13 / 4/ 5	12368	Heport to	IT Corp	
Required Report D		<del></del>						2790 mosside	Blvd.
nequii eu nepoi i D	ave_/_/_					PER LI	NE	Monroeville Pa	15146
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected	Container Type	7 Sample 18 Volume	Pre- <sup>19</sup> servative		ted Testing <sup>20</sup> ogram	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
156-032394	Soul	3-23-94	amber	(3) (Om)	40.	9015	0   0   1   1   1   1   1   1   1   1		
58-032394	501	3-23-94	amber	250ml	a yo	48.		FUR L	AB
0 A-033394	Soil #1	3-23-94	dimber.	100m	ia y	2015	er til	Uar U	MLY
na - 032394	SOIL	3:23.74	class	sz som j	(0 4°	118.1			
C-032394	<u></u>	3-23 54	a ber ass	13) 10ml	c. 40	9015		FOD-L	AB
DC-032394	Soils	3-23-94	glass	SOM!	0 40	418.1		USE O	ŴY.
54E-032394	501	3-23-94	almbur glass	(B)	co 4°	8015			
64E-032394	5011 = = =	11:50 3-23-94	ambir	050ml	ice 4º	418.1			····
Special Instructio	ns: <sup>23</sup>		1	4	· · · · · · · · · · · · · · · · · · ·				
Possible Hazard I Non-hazard 🔼 Fl		rritant 📮 🛮 Poi	ison B 📮	Unknow		Sample Di Return to C		sal by La <b>p (_i</b> Archive	(mos
urnaround Time		auc	Q( 1.[,	C Level: 2	7 III. 🛄	Project Sp	ecific (specify);		
I. Relinquished by Signature/Affiliation)			te: <u>3/23/</u> ne: <i>4/30</i>	GI	1. Rece	ived by 28 Affiliation)		Date:_ Time:	
. Relinquished by ignature/Affiliation)		Dat Tim	te:	:	2. Rece		<del></del>	Date:_ Time:	
B. Relinquished by Signature/Affiliation)		Dat Tim	te:		3. Rece	ived by	· · · · · · · · · · · · · · · · · · ·	Date: Time:	,
nents: 29				4			·	11116,	



#### ANALYSIS RELEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.30 4/3/608 Page \_\_\_ of \_\_\_

Project Name 41. Story

Project No. 519029

Samples Shipment Date 3-23-94

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Sample <sup>14</sup> Number	Sample 15 Description/Type	Collected	Туре	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
317D-033394	Soil	3-23-94		(3) 10ml	10 40	8015		
3170-037394	soil with	12:00 / 3-23:44	donbir	Image	10 4°	4181		LAB
359F+033394	<u> 501</u>	12:15	amber	(3)	10 40	8015	USE	ONLY
369F1)33394	50	12:15	dess dess	250ml	100 40	418.1		
273A -032394	Soil a	12.70	amber	3) 10ml	l '.	8015		TRIEV
273A-032394	Soil	12:10	doss amber	250ml		418.1	W-Jh	
315C-032394	501	טעיבן	aniur	(3)	1Ce. 38	5015	FOR	LAE
315(-03)394	50.	12:40	of bir	:50.00	ic 4º		USE	$\mathfrak{I}_{N}$
357E-032394	501	5:35 3-33-4	ameus	Onl	100 110	3015		
1		135	a Cair	50ml		418.1		
3578-032394	Soul   1   2   2   2	13-99	Slass	- KIMI	1117 4	710.1		rapid di Sidi dan di
							7. C	
		<u> </u>		:				
2		<del>                                     </del>						20 20 20 20 20 20 20 20 20 20 20 20 20 2
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Page 1 of 🞝		•

	No. 1 Fort Story		pies Snipn	nent Date		3- <i>94</i> B	ill to:5 Tom Mathis	on -
	ers 2 Demarca Be	mardo	Lab D	estination	8 T.T.	Export	2790 Mosside Monioeville 1	pind.
Profit Center	No. 3 3511		La	b Contact	9 Carri	e Smith	do II Co	co
Project Mana	iger 4 Tom Mathiso	Proj	ect Contá	ct/Phone	12 Ma	Hison (412) 372-7	to: 10 Tom Mathison	
Purchase Order	No.6 519029	<u> </u>	Carrier/W	Vavbill No	13 1416	12366 Hepor	IT Corp	1
Required Report D			· · · · · · · · · · · · · · · · · · ·				2790 mosside	Blvd
						PER LINE	Monroeville PA	15146
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected	Container Type	Volume	servative	Requested Testing 2 Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
14B-032394	soil is	7:15 3-25-94	ambir glass	(3)	140	8015		
94B-032394	Soil	7-15	amber 91955	250ml	14 40	418.1	FUR	LAB
36D-1032394	501	3-23-04	dmbir.	601	14	PX)15	USEL	JULY
360-032394	501	3-23-74	mber 1955	SOM	ice yo	4185.1		
18F-032394	Soil	7:46 3-23 94 7:40	ambir lass	(Oml		8015	EOD	
78F-032394	501	3-23-94	amber glass amber	250ml	100 40	4181	USE	Щү
55A -032394	Soil	7:40	glass amber	(3)40ml	1.	8015		***
55A-032294	SOIL	7:40 3-23-94	glass	250 ml	ice yo	4181		
Special Instructio	ns: <sup>23</sup>				1. 1.			
Possible Hazard I Non-hazard 🖾 🛚 Fl		itent 🗐 🛚 Poi	son B 🖵	Unknowi		Sample Disposal: <sup>25</sup> Return to Client D	lisposal by Lab 🔯 🛚 Archi	ve (mos
urnaround Time Jormal 🕮 Rush			Q( 1.5	C Level: <sup>2</sup>	7     . <b>   </b>	Project Specific (specifi	v):	
. Relinquished by Signature/Affiliation)			e: <u>3/23</u> e: 4/8/)	194	1. Rece (Signature//	ived by <sup>28</sup> Affiliation)	Date Time	
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Project Name Fort Story

#### ANALYSIS REGJEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 519029

Reference Document No.30 1/3684 Page 2 of 2

Samples Shipment Date 3-23-94

ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Container 17 Type	Volume	servetive	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
297(-032394	7 5011 2 W	3-23-94	91955	(3) 60ml	ارد ۱۹۰	8015		
2970-032394	501	8:00 3-23-94		250m	ice 40	418.1	FOR	LAS
339E-032394	soil.	3-23-94	ambur alass	(3) 60m		8015	USE	ONLY
331E-032344	•	9:15 3-23-94	amber alass		ice 40	418.1		
90B-03_394		8.30 3.33.94	amber 91855	(3) 60m	-1 (0	හරා5	PUR	
908-032374		8:30	dmbir	250nl	160	418.1	Util.	JINI.Y
908 DUP-0333		8:30 3-23-94	amber	(3)	ice .	2015	FOR	
90BDUP-03239		D:30 3-23-14	mbir		16 40	418.1	USE	
707000 03237		3 3 3	3422	1300	1			
, a		11		-			FOR	LAB
							USE.	DWLY -
			e					
								<u> </u>
	<u> </u>							
	· <u>-:</u>	, se <sup>2</sup>						ANIX-
							<u> </u>	
							USE	JALY
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Reference Document No. 113696
Page 1 of <u>a</u>

mple Team Membe		<del></del>				Corp Export	IT Corp 2790 Mosside	Blvd
Profit Center N			Lat	Contact	9 Curi	e Smith	Montreville	Pa 15146
•	ger4 Tom Mathis	<u>on</u> Proj	ect Contac	t/Phone	T ma	thison Hi2-372-770   Report	to: 10 Tom Mathisor	n
Purchase Order N		<del></del>	Carrier/W	/aybill No	13 /4	5/223686	IT Corp	3/10
Required Report Da	ate 11		ONE	CONT	AINER	PER LINE	Monroeville Pa	
Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time 16 Collected	Туре	Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program		Disposal <sup>22</sup> Record No.
3320-032594	501	8:40 3-23-94	ambir 91955	(3). 60ml	140	8015		
32D-032394	soil so	8:40 3-23-94	amber 91955	250ml		48.1	FUK I	
374F-032394	Soil	3-23-01	amber	60 1	ice 4	8015	U D E U	
374F-032394	501	3-23-94	lass	250m		1181		
160A-032394	SOI	9:03 3-25:94		3)60001		8015	EOD	AS
2604-03-394	Soil	9:00 3+23-94		320W	ice 40	418.1	LIGEO	MIV
302C-032394	Soil 1	9:15 3-23.94		(3)	Ke 40	8015		
302C-032394	501	9:15 3-23.94	almber, 91655	250ml	ia 40	418.1		
Special Instruction	ns: <sup>23</sup>					, v		
Possible Hazard Id Non-hazard 🙋 🗀 Fla		tent 🗐 Poi	ison B 📮	Unknowi		Sample Disposal: <sup>25</sup> Return to Client 🔲 Dis	sposal by Lab 🎑 🛚 Archiv	/e (mos.)
Turnaround Time Normal 🖄 Rush	Required: <sup>26</sup>	days	Q( - I.[	C Level: <sup>2</sup>	7 III. <b>Q</b>	Project Specific (specify):		
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### ANALYSIS REGUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. \_\_519029

Samples Shipment Date 3-23-94

ONE CONTAINER PER LINE

			)	00.00		LLU FIIAT	L		
Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Volume	servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.	
344E-032394	501	3-23-94	9/255	(3)	1ce yo	80,15			
344E 032394	Soi)	3-23-94	amber 9/ass	250 M	10, 40	418:1	FOR	LAB	
205B-032394	50i	9:10 3.23-94	almbur 91955	3) wom/	14 48	8015	USE	DMLY	
95B-032394	soi	9 <b>26</b> 5-23-94	91055	250ml	14 40	418.1			
285B DUPB2394	≤oi)	9 20 3 · 2 3 · 9 · /	gaber 1/955	(3)60ml	140	<b>୪</b> ୦ <i>। 5</i>		JWLY -	
858DUP-032394	<b>≤</b> 0;	9: 20 3-23-94	91955	250ml	_	418.]			
27D-032394	Soil	9:20 3-23-94	9 455	3)600	ia Vo	DO15	FOR	L/4/3	
27 D-032394	Soil	9:20 3:23-4	9 7 55	187 W	id 40	418.1	USE	DNLY	
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		Fee							
	prosent for the second		4.3						
<u> </u>								DNLY	
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Page	1	of	2			<b>/</b>			

ample Team Memb	No. Hort Story Ders <sup>2</sup> De Marco   Be No. <sup>3</sup> 3511	crardo	Lab D	estination	817 E	* · · · · · · · · · · · · · · · · · · ·	,	Tom Mathison IT Corp 2790 Mosside	Blrd
	ager Tom Mathis	on Proj	ect Conte	ct/Phone	12. ma	thison (412) 37	2-770).	morrowille Pa 10 Tom Mathison	15/96
Purchase Order	No. 6 519029	- P (1)	Carrier/W	Vaybill No	13 1415	123686		LI LORYS	
Required Report D	Date 11					PER LINE		2790 Massido	
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected	Container <sup>1</sup> Type	Volume	Pre- <sup>19</sup> servative	Requested Testi Program	<del>-</del> -	Condition on <sup>21</sup> Receipt	Disposal <sup>2</sup> Record No.
69 F- 032394	Soil	3-23-94 9:40	amber	(3)	40	80IS			
1995-032394	Soil	3 23-94 9:40	amber	250ml	ce 40	48.1	٠. :	FUR	LIAB
65A-032394	Soil	9:40	amber alass	60m	ice yo	0015		USE (	JULY
165A-032394	soil	3-2-94	ambur class	MUGS	ice yo	118.1			
070-032394	Soil	B-23-24	amber	Floom!	ia yo	8015		COP	IAB
107c-032394	501	3-23-94	amber 9055	D50ml	ce 40 (	118.1	·	LIGE	
49E-032394	soi)	3-23-94	ambur	(3) (0)ml	ia yo	8015	:		
49 E-032394	~.50i	1 , , , ,	amber 01055	250ml	10	418.1			
Special Instruction	ons: <sup>23</sup>								
Possible Hazard Non-hazard <b>u</b> F		ritant 🛄 Poi	son B 🖳	Unknowi		Sample Disposal: Return to Client 🛄		al by Lab 🛍 🛚 Archi	ve (mp
Turnaround Time Normal 💋 🛮 Rush		aus	G(	C Level: <sup>2</sup>	7 	Project Specific (sp	ecify);		
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#### ANALYSIS REGUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

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Project Name Fort Ston

519029 Project No.

Samples Shipment Date 3-23-94

·			ONE	CONT	AINER	PER LINE		
Sample 14 Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Container 17 Type  amur	Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
280 <b>B</b> -032394	soil .	10:20 3-23-94	9/955	60ml	ice 40	8015		
28015-032394	501∖	10:20	amber 91955	250m	ice yo	418.1	FOR	LAB
3220-032394	Soi∖	10:30 3-23-94	ambur glass	(3) 60ml	ice 40	<b>୭</b> ୦15	USE	OMLY
3220-032394	<b>5</b> 0i∫	3-23-94	a'mbur a lass	250 m)	ia 40	418.1		
364F-032394	501)	3-23-94	ambir 91ass	(3) (d)n)	ice 40	8015		
322 D DUP03234	4 501	10:30 3-23-94	glass	3) (d0m)	ic 48	1	UJ.	
3221) DUPU3239		3-23-94	amber glass	250-0	1	18.1	FOR	LAB
WF-032394	501	10:30 3-23-9	alass	950m	ice 46	418.1	USE	DNLY
			0					
								J. S. W. J., T
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Project Name/N	Vo. Yort Story 5191	Sam	ples Shipn	nent Date	7 3-2	14-94 Bill t	:0:5 Ten Mathison	ì
ample Team Membe	ers 2 De Marco B	urmido	Lab D	estination	8 77	Export	IT Corp 2790 Mosside	Bhd i
Profit Center I	No. 3 35/1		Lal	b Contact	9 Carrie	smith	manroquille Da	15144
Project Mana	gerttom Mathi	son Proj	ect Contac	ct/Phone	12T. mat	Neo. (412) 372-7701 Report to	- 10Tim Mathisa	
Purchase Order I	No. 6 519029		Carrier/W	Vaybill No.	13 1451	372/20 Hebout a	II Coro	
	ate 11 hormal TI					\	2790 Mosside Bl	vd.
						PER LINE	Monroeville Pa	
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16	Container' Type	Volume	pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
4008-632494	≲oi\	11:15 3-24-94	ambur class	(3)	iar	80K		
4mB-03249d	Λ	3-24-94	9	250m	1	#18.1	FOR L	45
443D-032494		11:20 3-24-94		1000		2015	Ust O	
4420-032494		11:12 3:24 84 =	N . L	a Da		418-1		
40313-032494		13-24-14		(3) 100ml	<u> </u>	8015		A 53
40313-032494		3.54.94		250ml		418.	<u> </u>	JLY
445D-032494		3-24-94	. ↓	(3) 60ml	1	8015		
445D-032494	≤01	11:38	antur	250ml	ice yo	418.1		
Special Instruction	ns: <sup>23</sup>				. *			
Possible Hazard Id Non-hazard		ritant 🗐 Poi	son B 🛄	Unknowr		Sample Disposal: <sup>25</sup> Return to Client  Disp	osal by Lab 🗹 🛚 Archive	(mos
Turnaround Time	Required: <sup>26</sup>	ulc	Q(	C Level: 2	7	Project Specific (specify):		
1. Relinquished by (Signature/Affiliation)		Dat / Tim	e: 3/24	9/41		ived by <sup>28</sup>	Date: Time:	
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3. Relinquished by (Signature/Affiliation)		Dat Tim	e:	·	3. Recei	ived by	Date:_ Time:	
Comments: 29				- '	<u> </u>		Tittic.	



#### ANALYSIS REGJEST AND CHAIN OF CUSTODY RECORD (cont.)\*

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Reference Document No.30 1/3 6/5 Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3-24-94

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Sample 14 Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Туре	Volume	servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
487F-032494	Soil	11:50 3.24.44	amber glass	(3) (0)m1	100 110	8015		
487F-032494	1	3.15.594	个	ason	ia y.	418.1	FOR	LAB
398A - 03>494		3-54-94		(3)	ia 40	8015	USE	DNLY
39BA-037/44		3-24-94		250ml	ia 40	418.1		
402 E-032494		3-24-94		(5) 60m	10,40	8015		
482E-032494		12:12 3-24-94		250ml	16 40	418-1	<b></b>	
484F-032494	<i>√ γ γ γ γ γ γ γ γ γ γ</i>	12:30	1000	(3)	ice 🕶	8015	SOR	
404F-032494	501	12:30 3-24-19	anounder	250m	1940	4181	USE	ONLY
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	Property ( 1320	ans,	11	7)			March March March	
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Reference Document No. 11	3610
Page 1 of 2	

Project Name/	No. 1 Fort Story 51	9029 Samı	ples Shipm	ent Date	73-2	4-94 Bill to	5 Tom Mathison	· · ·
Sample Team Memb	ers 2 Demarco Bui	nudo_	Lab De	estination	8 IT	Export	IT Corp 2790 Mosside	Rud
Profit Center	No. 3 351	· .	Lat	Contact	9 Ourn	1 Smith	monroeuille Pa	//
Project Mana	ager Tom Mathusc	Proje	ect Contac	t/Phone	12 T Mar	hison (412) 372-7701 to	ToTom Mathian	15146 ;
Purchase Order	No. 6 519039	<u> </u>	Carrier/W	/aybill No.	13 1451	233690 neport to	IT UMP	• .
Required Report D	Date 11 Normal TAT					PER LINE	monioeville Pa	
0		16	Container <sup>1</sup>					<u> </u>
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected	Туре	Volume	servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
2700 Maniford		8:00	amber	(3)	140	გი;5	·	
3794-832494	Soil	3:04-94 8:00	amber	(00 m)	ia		Ene I	AR :
379A -032494	Sail	3-24-94		250ml	40	<b>#</b> 18./		
421C-032494	Soil	8:15	amber	60.	ia 50	8015	Wal y	
4210-032494	soil and	8:54 3:24 84	mur	IMUCE	ia yo	418.1		
418 B-032494	501	t: 13-24 94	donler	3) 40ml	ice .	2:015		
		8:15	amur	asoml	ia yo	418.1		
4183-032494	301	8:27	amber	(3)	ica		- Uat U	The large M
393A-032494	Soul	3-24-94 8:37	405	10hl		8015	· · · · · · · · · · · · · · · · · · ·	
383A-032494	soil	3-24-94	glass	250ml	ice 40	418.1		9
Special Instruction	ons: <sup>23</sup>							
Possible Hazard						Sample Disposal: <sup>25</sup>		9
	lammable 🖳 Skin Irri	tant 🔟 Poi	son B	Unknowr		Return to Client 🖳 Dispo	sal by Lab 🕰 Archive	(mos.)
Turnaround Time	: Hequired: 20	ule	العا ا	C Level: 2	, 	Project Specific (specify);_		
	28 Down Down	Dat	ie: 3/2	1/93/	_	ived by 28	Date:_ Time:	
		Dat		9	2. Rece		Date:	
2. Relinquished by (Signature/Affiliation)		Tim			(Signature/A	Affiliation)	Time:	;
3. Relinquished by (Signature/Affiliation)		Dat Tim			3. Rece		Date: Time:	
Comments: 29					<u> </u>			
		<u> </u>	·		.21		<del> </del>	Ł.



#### ANALYSIS REGJEST AND CHAIN OF CUSTODY RECORD (cont.)\*

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Reference Document No.30 4/36/10 Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3-24-94

Number   Description/Type   Collected   Type   Volume   Servative   Program   Receipt   Receipt   Receipt   Signary   Class   Company   Collected   Construction   Constr	٠.			ONE	CONT	AINER	PER LINE		
3-94-44 Soil 3-94-	Sample <sup>14</sup> Number	Sample 15 Description/Type	Collected	Time	Volume	servative			Disposal 22 Record No.
3-94-44 Soil 3-94-	1256-032494	501		amber Glass	(3) 60ml	40	8015	_	
35-194 Soil 3-24-94 of the state of the stat	250-032494	501	8:34	cluss	Som	40	416.1	FOR	
3E-032494 Soil 3-24-44 Auss 100M 10 40 8015  TE-052494 Soil 3-24-44 Auss 100M 10 40 8015  TE-052494 Soil 3-24-94 Auss 250M 10 40 8015  DD-032494 Soil 3-24-94 Auss 10015  DD-032494 Soil 3-24-9	63E-032494	501 / 100	3-24-84	glags			හිට!5	USE	ONLY
17E 032494 501 3-24-94 4x55 250m 16 40 2015 USE ONLY  17E -032494 501 3-24-94 2x55 250m 16 40 418.1  17E -032494 501 3-	63E-032194	soil .	3-34-94	amlus	250ml	ia 40	418.1		
7E-052494 5011 3-24-94 0mlus of 250ml 10c 40 418.1  DD-032494 5011 3-24-94 of 2625  DD-032494		1	9:45	ameer	(3) 40 ml	10 40	· · ·	rum.	
0D-032494 Soil 3-24-14 gluss 3	67E-032494		8:45.	amber	250ml	ice 40			
20 - 03 2494   501   3 - 24 - 9   25   25   25   25   26   26   26   26	60D-032494	Soil	<b>छ</b> : 45	amer		ia ne		FOR	LAB
502F-032494 Soil. 3:24-4 21.55 0ml 10 40 8015  502F-032494 Soil. 5:50 20 20 20 20 20 20 20 20 20 20 20 20 20	60D-032494	4 3 4 5	3-24-4	mur	250 m	ia 40		USE	DMLY
25-032494 Soil, 18-50 250ml 19 4° 418.		1 1 1	₩ 8:5U	arter		1a 40	1		
FOR LAB USE ONLY  OSE ONLY  FOR LAB  FOR LAB  FOR LAB  FOR LAB	102F-032494	2.75.2	■ 8:50	antur					1-/- 1-1
									- CO 20 10 10 10 10 10 10 10 10 10 10 10 10 10
		90 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -						FOR	LAB
								USE	ONLY
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Profit Center	Ders 2 De Marco   B		lal	h Contaci	8 MRI		2790 Mossid Monrouville Pa	15/14 15/14
Project Man	ager <sup>4</sup> Tom Mathi	son Pro	ject Contac	ct/Phone	127 mat	hison (412) 372-77	to: 10 Tom mathi	500
	No. 6 519029		Carrier/W	Vaybill No	13 1451.	223 <i>675</i>	IT Corp	2.1
equired Report [	Date 11 normal Th	97	ONE	CONT	AINER	PER LINE	>790 mosside monrouulle Pa	15146
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 1	Container <sup>1</sup> Type	<sup>7</sup> Sample <sup>1</sup> Volume	8 pre 19 servative	Requested Testing <sup>2</sup> Program	<del></del>	Disposal <sup>22</sup> Record No.
5D-03-494	Soil	9:21	ambur	(3) (Onl	ia yo	<b>୧</b> ୦) ଦ		
5D-032494	Soil	9:21	ambur	250ml	10	40.1	FUR I	AB
DC-032494	soil	9:35 3-XI-0	anter	(Co.)	ice yo	HIGH 8015	USE O	MLY
X . 03 2491	soil	3-2494	emlus luss	250ml	ica do	1181		
17E-032494	501	3-24-4	muer		ice 4°	8016	EODI	AB
7E-032494	Soil	3-24-94	ancher	250ml	100 40	4181	USE O	NLY_
				<u> </u>				
pecial Instruction	ons: <sup>23</sup>		<u></u>	<u> </u>	;			
ssible Hazard	Identification: 24	ritent 🗐 Po	ison B 📮	Unknow	n 📮 🕴	Sample Disposal: <sup>25</sup> Return to Client D	isposal by Lab 🔼 💮 Archive	e (mos
ırnaround Time ormal الم			Q(	C Level: 2	?7 Ⅲ.□	Project Specific (specify	n).	
Relinquished by			te: 7/24		<del></del>	ved by 28	Date: Time:	
Relinquished by	PIOTINI LIVINA	Da Tin			2. Recei (Signature/A	ved by ffiliation)	Date: Time:	
Relinquished by	· · · · · · · · · · · · · · · · · · ·	Da Tin		ı	3. Recei		Date: Time:	



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Page 1 of \_\_\_\_

Profit Center I	ers <sup>2</sup> Demarco   Ber No. <sup>3</sup> 3511 iger <sup>4</sup> Tom Mathisc	Proj	Lal ect Contac	ct/Phone	9 Corrie	Export Smith Uson (412) 37 Aeport	IT Corp 2790 mosside Monrotuille f to:10 Tom Mathison	
	No. 6 519029 ate 11 normal Tr		Carrier/W	/aybill No.	1451	PER LINE	IT Carp 2790 Mosside Monrocuille	Blud
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected	Container <sup>1</sup> Type	<sup>7</sup> Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	· · ·	Disposal <sup>22</sup> Record No.
113.13-032494	501	9:00	anur gliss	(3) 100 ml	ia yo	8015		
13 B-032494	Soil	3-24-94	anter	250ml	ice	118.		
88A-032494	soil	9:17	amber.	600	, yo	2015	The state of the s	
98A032494	Sail	9:2	alur	250M)	ia			
55D-032494 55D-032494	Sail	3-34-34	amber	250ml	ia 40	8015 418.1	FOR	AB
SSDDUP-032494	Soil Andrew	9:21	anter	(3) 10mL	i'a yo	8015		
65DDUD-032494	Soil	3-24-94	amber	250ml	40	418-1		
pecial Instruction  Cossible Hazard Instruction  Consider Hazard Instruction  Consider Hazard Instruction  Consider Hazard Instruction  Consider Hazard Instruction  Consider Hazard Instruction  Consider Hazard Instruction  Consider Hazard Instruction  Consider Hazard  Consider	dentification: <sup>24</sup> lammable	ritant 🖳 Po	ison B 📮	Unknowr C Level: <sup>2</sup>	1 🛄 📗	Sample Disposal: <sup>25</sup> Return to Client  Dis Project Specific (specify)	sposal by Lab 4 Archive	e (mos
Relinquished by	<del></del>	Dat Tim	te: 3/24/	gu		ved by 28	Date: Time:	
. Relinquished by ignature/Affiliation)		Dat Tim	te:		2. Recei		Date: Time:	1
Relinquished by		Dat Tim			3. Recei		Date: Time:	



#### ANALYSIS REGJEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.30 //36/1
Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3-2494

			ONE	CONT	AINER	PER LINE		
Sample 14 Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Container 17 Type	Sample 18 Volume	servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
1728-032494	soil	3-24-94	glass	(3)	140	වරය		
1775-032494	501	9-30	anur class anur	250ml	100 40	418.1	FOR	LAB
BOC-032494	Soil	9:35	anter dass	(3)0ml	14 40	<b>5015</b>		ONLY
130C-032494	Soil	9:35 3-24-94	cluse	250m	14.40	418.1		
1300)001032494	soil	3-24-94	amur glass	(3) 60ml	ia 40	<b>୪୦</b> /5		
130CDUP-032494		3-24-94	Class	1350ml	lice 7	418.]		ad I W has I
408 B - 632494	Soi)	3-24-94	ambur oplass	(3)	ice	6015	FOR	LAB
1086-032494	Soi\ 1 a 2	3-24-97	cass	R5UM	iu 40	418.1	USE	OMLY
							FO. P.	LAS
	3						USE	ONLY
						in the second		
						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (
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Reference	Document Nc	41361	3
Page 1 of	2		_

Project Name/N	No. 1 Ford Story 5	19029 Samp	oles Shipm	nent Datë	7 3 -	R나 <u>의니</u> Bill to	5 Tom Mathisa	<u> </u>
	ers 2 DeMarco Burn		Lab Do	estination	8 TT	Export	IT COCO	<u> </u>
Profit Center I	Vo. 3 3511		Lai	b Contact	9 Corri	e Smith	2790 Mossia Monralyill P	0 15 WI.
Project Mana	ger <sup>4</sup> Tom Mathis	oo_ Proje	ect Contac	ct/Phone	12T. ma	theon (40)333557766	10 Tom matters	
Purchase Order I	No.6 519029		Carrier/W	Vaybill No	13 1451	223690	Toro	
Required Report D	ate 11 Normal TAT					PER LINE	mon rowill	Le Blud. Pa 151Uia
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected	Container <sup>1</sup> Type	Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
450D-039494	Soil	10:10 3-24-GU	umber	(3) 60ml	14 40	8015		
4502-632494	Soil	3-24-44	=	250ml		118.1	FUR L	AB
492F-032494	n	3-24		(00n	ice yo	8015	USE U	
4925-032494		10:13 3-30 94		PED m	ادد یاه	418.1		
393A 0324A		3-24-94		B)	ic 40	8015	- EOP I	AB
393A-03 <i>=</i> 494		3-24-94		1920 ml	انو به	418.1	<u>lieë n</u>	NIIV
4356-632494		3-24-94	1 A .	(3)	ia yo	8015 .1		
435C-03249	, W, ,	3-14-94	4	250 m)	ia 40	418.		
Special Instruction	ns: <sup>23</sup>	<u> 14</u>		en en de vij				
Possible Hazard lo	dentification: 24 ammable 🖳 Skin Irri	tant 📮 Pois	son B 📮	Unknowr	, <b>_</b>	Sample Disposal: <sup>25</sup> Return to Client 🗐 💎 Dispo	sal by Lab 🔬 🛚 Archive	e (mos.)
Turnaround Time	1_ ·			C Level: 2		D 12 D 15 ( 12)		
Normal Rush	28	<del>S</del> Data	ا.ل e:_ <i>3/24/</i>	7	III. 🛄	Project Specific (specify):	Date:	
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3. Relinquished by (Signature/Affiliation)	<del></del>	Dat Tim	e:		3. Recei	ved by	Date: Time:	
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#### ANALYSIS REGJEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 5/9029

Reference Document No.30 13613
Page 2 of 2

Samples Shipment Date 3-24-94

ONE CONTAINER PER LINE

			CIVE	CONT	JIIAFU. I	PER LINE		
Sample 14 Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Container 17 Type	Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
46C-032494	501	3-24-94	glass	(s) 60ml	ic 40	8015		
4400-032494		3-24-94	1	<b>≥€</b> 0		418.1	FOR	LAB
1778-032494		10:50 3-24-94		(3) 60ml		8015	USE	ONLY
MJE-0324-94		3.54.54		SEOWI		410.1		
77 EDUP-032494		10:50 3:24-94	77	(3) 60ml	*	හා5		
77E DUP-032494		10:50 3-24-94		250ml	4.	418.1		
499F-032494		3-24-4	1	(3)		5015	FOR	LAB
447F-032494	Soi	3-24-9	an HK 25	250 m	ic 46	418-1	0.55	OMLY
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Page 1 of 2 \*\*\*

Profit Center N			Lab Destination Lab Contact	9 Curre	Smith	Mancoevil	Mosside B	vd
	er Tom Mathis	Project (	Contact/Phone	17. mathi:	on(412)372-	7701 to: 10Ton Ma	thisan	
Purchase Order N	· · · · · · · · · · · · · · · · · · ·	Cari	rier/Waybill No	196269	51854	II Coc	poside Blvd	-
Required Report Da	te ''Normal TA		NE CONT		ER LINE	Monroeville		0
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected T	tainer <sup>17</sup> Sample <sup>18</sup> ype Volume	Pre- <sup>19</sup> servative	Requested Testin Program	g <sup>20</sup> Condition o	n <sup>21</sup>   R	Disposal <sup>22</sup> ecord <b>N</b> o.
346528727914	301	32844 0	uss 100m	1 c 40 6	015			
546 4 283 4 24		3-24-94	250ml	1 1 1	18.1			
283264614		3-28-94	Com		015			
12 A 328 94		3-2894	-Dm	٠	118.1	par leading to		<u> </u>
21 F 32894		3-384	3) 10ml	<b>8</b> 2 8	015			
21 F 3 2894		3-28194	250m)	4	18.1			V
79 1) 32894		10: 28°	(3) 60ml	ල	<b>&gt;15</b>		ton ( West I William	N N
790 72894	- Soil	10:20 am	wr 55 250ml	Q 40 4	18.1	:		*
pecial Instruction	s: 23 to Her	3425/44 Ken	3/8/1943/	Sotoffe A	late on las	HIS are 3/2	5/94	
	entification: <sup>24</sup> mmable 🖳 Skin Ir	ritant 🛄 Poison	B 🖳 Unknowi	Sa Ret	mple Disposal: aurn to Client	Disposal by Lat	Archive	(mo
urnaround Time I Jormal	Required: 20		QC Level: <sup>2</sup>		roject Specific (spe	ecify):		·-·-
. Relinquished by 2 ignature/Affiliation)	reia Bours	Date: Time:	3/29/94	1. Received (Signature/Affiliat	by 28 (ion)		Date: Time:	
. Relinquished by	***	Date: Time:	<del></del>	2. Received (Signature/Affiliat			Date: Time:	
. Relinquished by		Date: Time:	<u> </u>	3. Received			Date: Time:	



Project Name Ft, Story

#### ANALYSIS RELIEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 519029

Reference Document No.30 2/5 796
Page 2 of 2

Samples Shipment Date 3/28/94

ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Type	Volume	servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
537 B 32894	Soil	3/24/94	911si Amber	(3) 60ML	40.	8015		
5373 32894		3/24/94	4	25UML		418,1		LAB
537 B Dup 32194		3/24/94		(3) 20ml	\ .	8015	USE	ONLY
53713 Dup. 32874		3/28/44		250 ML		418,1		B 63 853
OI E 32494		3/28/04		(3) GOML		8015		
601 E 32494		3/24/94		SONL		418.1		had N W. Store R \
539032894		3/28/94		(3)		8015	FOR	
559 6 32 894		7/20/		5026		418.1		DNLY
517A 32894		3/20		ome.		8015-		5 63 873
517 A 32894		3/20/6/1		250m	4 - 1 4	418.1		
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Page 1 of \_2

Project Name/I	No. 1 Ft. Story 5 ers 2 De Marco/Be No. 3 35-11	7 <i>9029</i> Sam	ples Shipm	nent Date	7 3/28	bill	to:5 Em Mathison	· · · · · · · · · · · · · · · · · · ·
Sample Team Memb	ers <sup>2</sup> <i>De Marco   Be</i> No. <sup>3</sup> 35-11	mard !	Lab D	estination	8 TT	Export	2790 Mosside Mon Rosside	01 .
Profit Center	No. 3 3511	<u></u>	Lal	b Contact	9 CAFF	ic Sail	- 2 140 MOSSIDE	151-40,
Project Mana	ager 4 Ton Mathison	Proj	ect Contac	ct/Phone	12 7 1	Pothicus -	10	77, 3 07 76
Purchase Order	No. 6 519029	ا ا	Carrier/W	Vavbill No.	130/2	Report 6951.854	to: SAME	
Required Report D	late 11 Norman							
	2000	<u> </u>				PER LINE		1
Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time 16	Container Type	Volume	Pré- <sup>19</sup> servativě	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
567C-32894	Sil	3/28/04	Anber	(3)	ICE	8015		
567C 72894	7 h	3/28/04	2	SOME		M14.1	FURI	/A 3
GIIF 32894	14	7/30/04	411.7	10		8015	Uac u	
7.11 F 32894		3/20 04		DISUML		418.1		
609 E-32894		3/28/4		(31	1	8015		
609 F-32894		3/28/94		250AL		4/8,1	IICE	
525 A32894	er er er er er er er er er er er er er e	3/24/94		60m1	1.	8015		
525 A 32894	Soil	3/28/64		a.szmi		418.1	<u> </u>	
Special Instruction	ons: 23 Samples	were tal	Con 3	lasley	lost	los dates are	3/25/64	<b>-</b>
Possible Hazard I	Identification: 24	~	son B 🖳	Unknown		Sample Disposal: <sup>25</sup> Return to Client 🖳 🔻 Dis	sposal by Lab 🗐 💮 Archiv	e (mos.)
Turnaround Time			Q(	C Level: <sup>27</sup>	, <u> </u>	Project Specific (specify)	·	
1. Relinquished by (Signature/Affiliation)		Dat Tim		194	<del></del>	ved by <sup>28</sup>	Date: Time:	
2. Relinquished by (Signature/Affiliation)  Date: Time:					2. Received by Date:			
3. Relinquished by (Signature/Affiliation)		Dat Tim	te:		3. Recei	ved by	Date: Time:	····································
Comments: 29			<u>-</u>	<u>.</u>				
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#### ANALYSIS REGJEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. <u>5/9029</u>

Reference Document No.30 /13617 Page 2 of 2

Samples Shipment Date 3/28/94

ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time 16 Collected	Type	Volume	servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
54213-32894	Soil	3/28/94	Ambor	(3) 60ml	Ice	8015		
542 B-32894		3/24/911	4	250mc		418.1	FOR	LAB
5840-32894	and or way	3/20194		(3)	1	8015		DNLY
5440-32894		3/20/04		32241		4/8,1		
569D-32894		3/28/96		(7)	1 /	8015	USE	
369 D-32894		3/2 4/91		320m		418,1		
564D Dup 32844		2/28/94		(31		8015	FOR	48
64 D- Dig 32894	Sail	3/24/	Alais'	23000		418.1	USE	JWLY
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		1						
								- V & V V
							FOR	
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Project Name/	No. 1Ft. Story	519029 Sa	mples Shipn	nent Date	7	Bill t	0:5 Tom Mathison	<u> </u>
Sample Team Memb	ers 2 De Marco	Bernardo	Lab D	estination	8 MRD	-	IT COID	
Profit Center	No. 3 3511	<u> </u>	√ La	b Contact	9		-2790 Mossid - Monroeville D	n 1511/1
Project Mana	ager Tom Mo	thison Pr	oject Contac	ct/Phone	19 M	thison (12) Aepoin 2	Oho Ton Male	
Purchase Order	No. 6 5190	<b>5</b> 9	Carrier/V	Vaybill No	13062	4951865	IT COLO	
Required Report C	Date 11 Normal	THT =	<u> </u>	4 4 4 4 4	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	PER LINE	1 2790 Mossid	L Blod =
Sample <sup>14</sup>	Sample <sup>15</sup>		16 Container	<sup>7</sup> Sample <sup>18</sup>			Condition on 21	1514(c) Disposal 22
Number	Description/Typ	e Collected	Туре	Volume	servative	Program	Receipt	Record No.
788 D 32894	Soil	3/28/94	amber	(3) (1)ml	la yo	2015	accounters and fictions. Confirmments. March	
588 032894		9H0		250ml		478.1		/4/3
	**************************************	- 3/2×)a	4	4	1		<b>U</b> 3 : 0	
537 B 32494	<i>"</i>	3124		LOW		2015	<u> </u>	
437 13 32894		7/20/94		DEDMI		118.1		
569 D 72894		147		(3) 100n1		8015		
569 D 32994		3/20/20		250m		418.1		
53213-32894		12:20		(3)		8015	The State of The S	
5720-32894	Soil	12,20	anter		1Ce 40	41951		\$
-Special Instruction	7	3/30/		2011		CHO4	<del></del>	
Possible Hazard	Identification: 24	in Irritant 💷 🛚 F	oison B 🖵	Unknow		Sample Disposal: <sup>25</sup> Return to Client Dispo	osal by Lab	()
Turnaround Time		in in icanc 🚅 📑		C Level: 2		Heturn to Client 📃 - Disp	usar by Lab Archive	e (mos.)
Normal A Rush			į.Ę		<u>Q</u>	Project Specific (specify):		
1. Relinquished by, (Signature/Affiliation)	Donie Be	A A A A A A A A A A A A A A A A A A	)ate: 3/28/ ime: 4/50	94	1. Rece (Signature/A	ved by 28 (filiation)	Date: Time:	
2. Relinquished by Date: 2. Received by Date:								
(Signature/Affiliation)			ime:		(Signature/A		Time:	
3. Relinquished by (Signature/Affiliation)			late: ime:	· · · · · · · · · · · · · · · · · · ·	3. Rece (Signature/A		Date: Time:	
Comments: 29	<del></del>			· · · · · · · · · · · · · · · · · · ·	·		···· <u></u> ·	•:
			• . •					
		ì	<del></del>		- <del></del>		7	<del>,                                      </del>

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L	_		CORPORATION

Reference Document N	757	95
Page 1 of 2.	. <b>*</b>	

Project Name/N	vo. Fort Story	5 <i>19</i> 029Samp	oles Shipn	nent Date	7 3~2	8-94	Bill to:	5 Tom M	Whisa-		
	ers 2 De Marco							IT C	vrD		
Profit Center I		<u>-</u>				e Smith	-	2790 Monro		ide Blud	
Project Mana	ger4 Mathison	Profe		ct/Phone	1. 1.	11 -					P
	No. 6 519029	•				451854	port to:		Jathus	27	
Required Report D		A1 -	100					2790	mossic	Le Blu	
		2				PER LINE	<b></b>	Monro	wille	Da 151	46-
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected	Container Type	Volume	servative	Requested Testi Program	ing <sup>20</sup>	Condition o Receipt	n <sup>21</sup>	Dispos Record I	al <sup>22</sup> No.
676F32894 **	soi\	3-28-94	ambur glass	(3) (a)mi	10- 110	8015			a market and a	400 Manne	-3.* <b>•</b>
616F-32894		3 28 94		250ml		481				413 1114	<b>4</b> 18
57417-32894		3-28-04		Øm.		XVIS .				** <b>E_ I</b>	F., ,
574 D - 32894		3-24-94	3	C3)		18.1			•	• ,	i i
522A-32894		3-28-04	<b>J</b>  _	bom		<u> </u>					4 .
522A-32894		3-28-94 1250		250ml		વાજી.			= 1	ЩV	<u>.</u>
527B-32894		3-28-94	amber	(6) m		8015					<u>i</u>
5773-32894	soil >	3-28-94	glass	pecun)	1640	418.1					184
Special Instruction		were y	AKen	3/28/9		ttle date a		1/25/90			
Possible Hazard l Non-hazard	dentification: <sup>2</sup> 4 ammable 🗐 — Skin Irr	itant 💷 Pois	son B 💷	Unknowr		Sample Disposal: Return to Client		al by Lab 🔼	Archive_	ſ	(mos.)
Turnaround Time	Required: <sup>26</sup>	in the second	Q( 1.1,	C Level: 2	7	Project Specific (sp					
1. Relinquished by (Signature/Affiliation)	28 Doud Ben	Date Tim	e: 3/2%/ e: 430	194	1. Rece	ived by <sup>28</sup>			Date:_ Time:		
2. Relinquished by Signature/Affiliation)  Date: Time:				2. Received by Signature/Affiliation)  Date: Time:							
3. Relinquished by (Signature/Affiliation)	•	Dat Tim		*	3. Rece				Date:_ Time:	-	<del>- ) ;</del>
Comments: 29	<b>e</b>	(1)									



#### ANALYSIS REGUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 5/9029

Reference Document No.30 \_\_75795 Page\_\_2\_of\_\_2

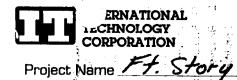
Samples Shipment Date 3/28/94

Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time <sup>16</sup> Collected	Туре	Sample 18 Volume	servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
606E 32894	Soil	3/28/94	Anter	GOME	7 6 6	8015		
606 6-32894		7/24/94		250ML		418.1	FOR	
5640-32894		3/28/94		(S) 60mL	)	8015	USE	ONLY
5642-32894		3/28/44	1	250ml		418,1		
532 B 32894		3 34 194		60mL		8015	USE	DNLY
532 13 32844		3/21/94		asumi		4/8,1	Wwk.	
532 B Dip37894		1:20		(3)		8015	FOR	LAB
532 B PUP 32894		3/24/6		2500		418,1	USE	ONLY
	A 1 4 3							
			<del></del>					
					_			
	<u></u>						USE	DMLY
			<u></u>					
	·						Sept. Sant. San.	
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Reference	Document No.	1	3615
Page 1 of			,

Profit Center Project Mana	ers <sup>2</sup> <i>DeMarco/IS</i> No. <sup>3</sup> 3511 nger <sup>4</sup> <i>Tom Mathiso</i> No. <sup>6</sup> 51 9029	Proje	Lab ect Contac	Contact t/Phone	9 CANT 12 T. M	Export  ie Sarth  Athisau (412) 8 - 270  Report	to: 10 Ton MA	11/0 /9/8/4
Required Report D Sample <sup>14</sup>	Sample 15	Date/Time 16	ONE	CONT	AINER	PER LINE  Requested Testing 20	Condition on <sup>21</sup>	Disposal <sup>2</sup>
Number	Description/Type	Collected	Туре	Volume	servative	Program	Receipt	Record No.
30 F-022894	Soil	7,20 3-24-99	Anber	(3)	.40	8015	-	
730F-03 <b>24</b> 94		770 3-284x	1	25m	- 40	<b>-4/8.1</b>	FOR	LAB
	W. Starte	7:50					<del>  U</del> SE	ONLY
880-0 32894		3-2×		601		8015		
88 V-032894		3-24-64	(	Jan.	<u> </u>	418,1	<u> </u>	/A
88 D- Dup 32894		3-2-94		(3)		# 8015		IAD'
880. Duy 3289		3-28-94		250m		418,1		
		\$:30		(3)		8015		
7613 - 325 94	- · / ·	3-28-91		60m				
46B-32894	Soil	3-28-94	1	250 M		418.1		
pecial Instructio	ns: 23 bottos 4	ith 3/25	194 100	ere the	Ker o	× 3/28/94		*
ossible Hazard I Ion-hazard 💋 📁 Fl	dentification: 24 ammable 🛄 Skin Irri		son B 📮	Unknown		Sample Disposal: 25		•
urnaround Time		canc <u>u</u> Pos		C Level: 27		Return to Client 🛄 Dis	sposal by Lab 🔲 🛚 Arc	chive(mo
lormal 🛂 Rush 🖟			1.5		ın.🖵	Project Specific (specify)	·	
. Relinquished by ignature/Affiliation)		Dat Tim		194	1. Receiv	ved by 28		ate: me:
. Relinguished by	bome / Semme	Dat			2. Receiv	<del></del>	<del> </del>	nte:
Signature/Affiliation) Time:					(Signature/Affiliation) Time:			me:
B. Relinquished by Date:  Signature/Affiliation] Time:					3. Received by Signeture/Affiliation) Date: Time:			



#### ANALYSIS RECEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Project No. 519029

Reference Document No.30 \_/36/5
Page 2 of 2

Samples Shipment Date 3/24/9

ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time.16 Collected			Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
591 £ 32874		7/28/94	9145	60ml	L'es	8015		nocora reg.
591 E 32894		3/28/41		250ML		418,1	FOR	LAB
549C32894	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3/28/94	A. San	(3)		8015	USE	DNLY
549 C 32894		3/28/au 9/10		250m	<u> </u>	4/8,1		
07 A 32894	2 10 to 10 t	3/29/94		COPL	<u> </u>	8015	FOR	
507 A 32894		7/28/94		050M	*	418,5	UUL	ONLY
126 F 32894	· 原 自著權力。	920 \$28/44 920		(3)		8015	EOR	LAB
626 F 32894		3/24 44	7	750 pm	:	418.1	USE	DMLY
96E 32844		930		3)		8015	į	
96 E 32894	The second secon	31:404		Dram)	•	418,1	FOR	
. <u>.</u>	Market Market	7 7						
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							USE	COLLY

MCA 3/15/91

**CHEMICAL QUALITY ASSURANCE REPORT** 



# DEPARTMENT OF THE ARMY MISSOURI RIVER DIVISION, CORPS OF ENGINEERS P.O. BOX 103, DOWNTOWN STATION OMAHA, NEBRASKA 68101-0103



REPLY TO ATTENTION OF

CEMRD-ED-L (200)

26 Jul 94

MEMORANDUM FOR Commander, US Army Engineer District, Omaha, ATTN: CEMRO-ED-ER (Jeff Hubbard)

SUBJECT: Fort Story Larc Area, Virginia Beach, VA, Chemical Quality Assurance Report

- 1. This is in response to the request from the Omaha District for quality assurance testing.
- 2. Enclosed is a copy of the Chemical Quality Assurance Report, SAB.
- 3. The Contractor for this project was International Technology (IT) Corporation of Monroeville, PA. The laboratory was IT Analytical Services (ITAS) of Austin, TX.
- 4. The Contractor's data met the HTW reporting requirements. Refer to the attached report for the quality assurance review.
- 5. No data discrepancies were noted.
- 6. The Quality Assurance raw data report was sent under separate cover on or about 26 Jul 94.
- 7. If there are any questions or comments, please call Laura Percifield, (402) 444-4304.

FOR THE COMMANDER:

Angles B. Tagget

Encl CQA Report DOUGLAS B. TAGGART
Director, MRD Laboratory

CF:

CEMRD-ED-EC

CEMP-RT (Ballif)

2 7 JUL 1994

# DEPARTMENT OF THE ARMY MISSOURI RIVER DIVISION, CORPS OF ENGINEERS DIVISION LABORATORY OMAHA, NEBRASKA 68102

Subject: Chemical Quality Assurance Report	
Project: Fort Story Larc Area, Virginia Beach, VA	
Intended Use: IRP-Army RA	
Source of Material:	
<pre>Submitted by: Jeff Hubbard, CEMRO-ED-ER</pre>	
Date Sampled: 22-28 Mar 94 , Date Received: 23-29 Mar 94	- <del></del>
Method of Test or Specification: See attached tables 001 - 012.	
References: Omaha District Request No. ENE 9577 dated 23 Nov 92	

#### -- REMARKS --

1. CONTRACTOR DATA EVALUATION: The contract laboratory (IT Analytical Services of Austin, TX) performed the analysis using EPA methods. Proper quality control procedures were followed and documented. The data for all parameters met the USACE HTW minimum chemistry reporting requirements as specified in ER 1110-1-263 (dated 1 Oct 90).

The Contractor provided chemical analytical results for 132 soil sample which were analyzed in the following manner:

- 132 soil samples for total petroleum hydrocarbons (TPH) by a modified EPA method 8015.
- 33 soil samples for total recoverable petroleum hydrocarbons (TRPH) by EPA method 418.1.
- a. ACCURACY: Factors indicating the accuracy of the Contractor's data include:
  - Surrogate spike (either o-terphenyl or benzo(a)pyrene with an acceptance range of 60-150%) recoveries which for TPH gasoline were within acceptable limits and for diesel were not reported for 23 samples and one method blank because of matrix interferences, were diluted out for 6 samples, and were low for 19 samples, 1 method blank and 2 blank spikes.

## 7-26-94
Percifield/glm/444-4313

- 2) Matrix spike/matrix spike duplicate (MS/MSD) recoveries which for:
  - a) TPH gasoline were within acceptable limits and for TPH diesel were within acceptable limits for two of nine batches. The recoveries for the other seven diesel batches ranged from 240% to 12000%.
  - o) TRPH were within acceptable limits.
- Blank spike (BS) recoveries which for:
  - a) TPH were within acceptable limits.
  - b) TRPH were not reported.
- b. PRECISION: Factors indicating the precision of the Contractor's data include:
  - Relative percent differences (RPD) for MS/MSD which for:
    - a) TPH were within acceptable limits.
    - b) TRPH were within acceptable limits.
  - RPD for BS were not reported.
  - 3) Laboratory duplicates were not reported.
- c. LABORATORY CONTAMINANTS: Method blank results for:
  - 1) TPH: Five method blanks contained any were from 7.2 mg/kg to 22 mg/kg TPH.
  - TRPH: No contaminants were reported.
- d. HOLDING TIMES: Holding times were for all samples except one TPH analysis in which the sample extract arrived at IT Austin dry.
- 2. QA/QC COMPARISON: Split and/or duplicate samples were submitted to MRD Laboratory for analysis. Comparison of the quality assurance (QA) and contractor test results are presented in tables 001-012. No data discrepancies were noted. The QA Laboratory detected a lubricating-type oil in the majority of the samples analyzed, but the TPH was quantified to  $\mathbf{C}_{25}$  and a lubricating-type oil is greater than  $\mathbf{C}_{25}$ .

### 3. OBSERVATIONS:

- a. Many TPH surrogate spike recoveries were either below acceptance limits, diluted out, or not reported because of matrix interferences.
- b. The following shipping and chain-of-custody errors were noted for the sample shipments received by MRD Laboratory:
  - 1) The samples included in the first shipment were not sealed in individual plastic bags.
  - No time sampled was included on the bottle labels.
  - 3) One sample was listed as 30D-032294 on the custody papers and 30B-032294 on the bottle labels. 30B-032294 was used for sample tracking.

- 4. QUALITY ASSURANCE SUPPORT ACTION: A cost estimate was furnished to the Omaha District Project Manager by MRD Laboratory. Sample receipt was completed by the MRD Laboratory Project Manager in conjunction with the Omaha District. Copies of cooler receipt forms and custody papers were furnished to the Omaha District personnel on a daily basis.
- 5. SUMMARY: The data package submitted for this project met the USACE minimum chemistry data reporting requirements.

Many TPH surrogate spike recoveries were either below acceptance limits, diluted out, or not reported because of matrix interferences. The majority of the MS/MSD recoveries for the TPH data were very high. The spike amounts were not provided to the reviewer; and the concentrations are critical for evaluation of the MS/MSD data. Based on the observed recoveries there are possible analytical problems or the samples are inhomogeneous.

No data discrepancies were noted. The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

Submitted by:

Douglas B. Taggart

DOUGLAS B. TAGGART
Director, MRD Laboratory

#### COMPARISON OF QA & CONTRACTOR RESULTS

Project: Fort Story Larc Area, Virginia Beach, VA

QA Sample ID.: 082D-032294 --Material Description: Soil

Contractor's Sample ID.: 82D-032294

Date Sampled: 22 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	360	-	mg/kg	Modified 8015	<10 X	140	mg/kg

Table 002

QA Sample ID.: 308-032294

Contractor's Sample ID.: 30B-032294 Date Sampled: 22 Mar 94

Material Description: Soil

QA Lab

Result

130

Units

Analysis

QA Lab

Contractor

85

Result Result Units

MISCELLANEOUS

Total Recoverable

Analysis

Petroleum Hydrocarbons

mg/kg

Contractor

Result

Modified 8015

<10 X

mg/kg

Table 003

QA Sample ID.: 290B-032394

Material Description: Soil

Contractor's Sample ID.: 2908-032394

Date Sampled: 23 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS				·			
Total Recoverable Petroleum Hydrocarbons	240	450	mg/kg	Modified 8015	<10 X	210	mg/kg

Table 004

QA Sample ID.: 2858-032394

Material Description: Soil

QA Lab

Result

Contractor's Sample ID.: 285B-032394

Units

Analysis

Date Sampled: 23 Mar 94

Contractor Result Units

MISCELLANEOUS

Analysis

Total Recoverable Petroleum Hydrocarbons

100 120 mg/kg

Contractor

Result

Modified 8015

<10 X

QA Lab

Result

140

mg/kg

COMMENTS:

-: Not analyzed or not reported.

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

hydrocarbons.

# DEPARTMENT OF THE ARMY Missouri River Division, Corps of Engineers Division Laboratory Omaha, Nebraska

## COMPARISON OF QA & CONTRACTOR RESULTS

Project: QA Sample 1D.: Material Description:	322D-032394	Larc Area, Vir	ginia Beach	•	r's Sample ID.: 322D-0 Date Sampled: 23 Man			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Unit	
MISCELLANEOUS								
Total Recoverable Petroleum Hydrocarbons	6600	4800	mg/kg	Modified 8015	<10 X	1300	mg/kg	
	enter to the second	Rich British					1 100 S. S. S. S. S. S. S. S. S. S. S. S. S.	
Table 006								
QA Sample ID.: Material Description:				Contractor's Sample ID.: 455D-032494 Date Sampled: 24 Mar 94				
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units	
MISCELLANEOUS								
Total Recoverable Petroleum Hydrocarbons	1200		mg/kg	Modified 8015	<10 X	430	mg/kg	
		A Au North						
Table 007		-						
QA Sample ID.: Material Description:				Contractor	's Sample ID.: 430C-0 Date Sampled: 24 Mar			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units	
MISCELLANEOUS								
Total Recoverable Petroleum Hydrocarbons	1800	- -	mg/kg	Modified 8015	<10 X	120	mg/kg	
							, 19,1 <sup>11</sup>	
Table 008	·							
QA Sample ID.: Material Description:				Contractor	's Sample ID.: 477E-0 Date Sampled: 24 Mar			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units	
HISCELLANEOUS				-	-			
Total Recoverable Petroleum Hydrocarbons	440	•	mg/kg	Modified 8015	<10 X	620	mg/kg	
COMMENTS: -: Not analyze	d or not repo	rted.						

#### COMPARISON OF QA & CONTRACTOR RESULTS

Project: Fort Story Larc Area, Virginia Beach, VA

QA Sample ID.:

537B32894

Contractor's Sample ID.: 5378-32894

Material Description: Soil

Date Sampled: 28 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	47	-	mg/kg	Modified 8015	<10 X	52	mg/kg
		and the second of the second of the second	, love				

Table 010

QA Sample ID.:

588032894

Contractor's Sample ID.: 5880-32894

Material Description: Soil

Date Sampled: 28 Mar 94

QA Lab Contractor QA Lab Contractor Analysis Result Result Units Analysis Result Result Units **HISCELLANEOUS** Total Recoverable Petroleum Hydrocarbons 520 Modified 8015 mg/kg <10 X 120 mg/kg

Table 011

QA Sample ID.: 569032894

Contractor's Sample ID.: 5690-32894

Material Description:

Soil

Date Sampled: 28 Mar 94

Analysis MISCELLANEOUS

Total Recoverable

QA Lab Contractor Result Result

Analysis

QA Lab Result

Contractor

Result Units

350

mg/kg

Units

Modified 8015

<10 X

190

mg/kg

Table 012

QA Sample 1D.: 532B32894

Result

Date Sampled: 28 Mar 94

Contractor's Sample ID.: 5328-32894

Material Description: Soil

Petroleum Hydrocarbons

Analysis

QA Lab

Contractor Result Units

Analysis

QA Lab

Contractor Units

MISCELLANEOUS

Total Recoverable

270

Result

Result

Petroleum Hydrocarbons

mg/kg

Modified 8015

<10 X

180

mg/kg

COMMENTS:

Not analyzed or not reported.

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

# 2 7 JUL 1994

# DEPARTMENT OF THE ARMY MISSOURI RIVER DIVISION, CORPS OF ENGINEERS DIVISION LABORATORY OMAHA, NEBRASKA 68102

Subject: Chemical Quality Assurance Report
Project: Fort Story Larc Area, Virginia Beach, VA
Intended Use: IRP-Army RA
Source of Material:
Submitted by: <u>Jeff Hubbard</u> , CEMRO-ED-ER
Date Sampled: 22-28 Mar 94 , Date Received: 23-29 Mar 94
Method of Test or Specification: See attached tables 001 - 012.
References: Omaha District Request No. ENE 9577 dated 23 Nov 92

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- · 33 soil samples for total recoverable petroleum hydrocarbons (TRPH) by EPA method 418.1.
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- 2) Matrix spike/matrix spike duplicate (MS/MSD) recoveries which for:
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    - b) TRPH were within acceptable limits.
  - 2) RPD for BS were not reported.
  - 3) Laboratory duplicates were not reported.
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  - No time sampled was included on the bottle labels.
  - 3) One sample was listed as 30D-032294 on the custody papers and 30B-032294 on the bottle labels. 30B-032294 was used for sample tracking.

- 4. QUALITY ASSURANCE SUPPORT ACTION: A cost estimate was furnished to the Omaha District Project Manager by MRD Laboratory. Sample receipt was completed by the MRD Laboratory Project Manager in conjunction with the Omaha District. Copies of cooler receipt forms and custody papers were furnished to the Omaha District personnel on a daily basis.
- 5. SUMMARY: The data package submitted for this project met the USACE minimum chemistry data reporting requirements.

Many TPH surrogate spike recoveries were either below acceptance limits, diluted out, or not reported because of matrix interferences. The majority of the MS/MSD recoveries for the TPH data were very high. The spike amounts were not provided to the reviewer; and the concentrations are critical for evaluation of the MS/MSD data. Based on the observed recoveries there are possible analytical problems or the samples are inhomogeneous.

No data discrepancies were noted. The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

Submitted by:

Douglas B. Jaggart
Douglas B. Taggart

Director, MRD Laboratory

## COMPARISON OF QA & CONTRACTOR RESULTS

Proj	ject: Fort	Story Larc Area,	Virginia Beach, \	/A

QA Sample ID.: 082D-032294

Contractor's Sample ID.: 820-032294

Material Description: Soil

Date Sampled: 22 Mar 94

mg/kg

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	360	-	mg/kg	Modified 8015	<10 X	140	ma/ka

#### Table 002

QA Sample ID.: 308-032294 Material Description: Soil

Contractor's Sample ID.: 30B-032294 Date Sampled: 22 Mar 94

Analysis MISCELLANEOUS	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
Total Recoverable Petroleum Hydrocarbons	130	<u>-</u>	mg/kg	Modified 8015	<10 X	85	mg/kg

## Table 003

QA Sample ID.: 290B-032394

Material Description: Soil

Contractor's Sample ID.: 2908-032394 Date Sampled: 23 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	240	450	mg/kg	Modified 8015	<10 X	210	mg/kg

#### Table 004

QA Sample ID.: 2858-032394 Material Description: Soil

Contractor's Sample ID.: 285B-032394 Date Sampled: 23 Mar 94

				Date Salpted: 25 Har 74				
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units	
MISCELLANEOUS								
Total Recoverable Petroleum Hydrocarbons	100	120	mg/kg	Modified 8015	<10 X	140	mg/kg	
COMMENTS:				······································				

# -: Not analyzed or not reported.

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

### COMPARISON OF QA & CONTRACTOR RESULTS

Project: QA Sample ID.: Material Description:	3220-032394	arc Area, Virg	inia Beach,	Contractor's	Sample ID.: 322D- te Sampled: 23 Ma			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Unit	
MISCELLANEOUS								
Total Recoverable Petroleum Hydrocarbons	6600	4800	mg/kg	Modified 8015	<10 X	1300	mg/kg	
							A	
Table 006								
QA Sample ID.: Material Description:				Contractor's Sample ID.: 455D-032494 Date Sampled: 24 Mar 94				
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units	
MISCELLANEOUS								
Total Recoverable Petroleum Hydrocarbons	1200	-	mg/kg	Modified 8015	<10 X	430	mg/kg	
			ARD, DR					
Table 007								
QA Sample ID.: Material Description:					Sample ID.: 430C-0 te Sampled: 24 Mai			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units	
MISCELLANEOUS				·				
Total Recoverable Petroleum Hydrocarbons	1800	•	mg/kg	Modified 8015	<10 X	120	mg/kg	
			January Al					
Table 008								
QA Sample ID.: Material Description:					Sample ID.: 477E-0 te Sampled: 24 Man			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units	
MISCELLANEOUS								
Total Recoverable	440			Madified 8015	-10 V			

# COMMENTS:

Petroleum Hydrocarbons

-: Not analyzed or not reported.

440

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

Modified 8015

<10 X

620

mg/kg

mg/kg

#### COMPARISON OF QA & CONTRACTOR RESULTS

Project: QA Sample ID.: Material Description:	537832894	Larc Area, Vir	gima beach		s Sample ID.: 5370 Date Sampled: 28 i		
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Unit
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	47		mg/kg	Modified 8015	<10 X	52	mg/kg
							Vici.
Table 010							
QA Sample ID.: Material Description:	588032894 Soil				s Sample ID.: 5880 Date Sampled: 28 P	9-32894 Jar 94	
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	520	•	mg/kg	Modified 8015	<10 X	120	mg/kg
			7 - 100 - 10		W.	The second of th	
Table 011							
QA Sample ID.: Material Description:	569032894 Soil				s Sample ID.: 5690 Date Sampled: 28 M		
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	350	•	mg/kg	Modified 8015	<10 X	190	mg/kg
			. 800				
Table 012							
QA Sample ID.: Naterial Description:	532B32894 Soil				s Sample ID.: 5328 Date Sampled: 28 M		
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							

### COMMENTS:

Total Recoverable

Petroleum Hydrocarbons

-: Not analyzed or not reported.

270

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

mg/kg

Modified 8015

<10 X

180

mg/kg

# DEPARTMENT OF THE ARMY MISSOURI RIVER DIVISION, CORPS OF ENGINEERS DIVISION LABORATORY OMAHA, NEBRASKA 68102

2 7 JUL 1394]

ty Assurance Test Results
Story Larc Area, Virginia Beach, VA IRP-Army RA ial:
Jeff Hubbard, CEMRO-ED-ER
22-28 Mar 94 , Date Received: 23-29 Mar 94 or Specification: See attached test result sheets.
aha District Request No. ENE 9577 dated 23 Nov 92

#### -- REMARKS --

- The samples arrived in good condition, however, there were some sample labelling and chain-of-custody errors.
- 2. Enclosed are the following:

Part A: Sample Receipt Information (1 page)

Part B: Chain-of-Custody Information (14 pages)

Part C: Quality Assurance Test Results (35 pages)

3. The Chemical Quality Assurance Report will be forwarded to you under separate cover on or about 26 Jul 94.

Submitted by:

DOUGLAS B. TAGGART

Danglas b. Jaggant

Director, MRD Laboratory

2P 7-26-99
Percifield/glm/444-4313

PART A
SAMPLE RECEIPT INFORMATION

QA/QC Table #	Customer Sample #	Date Sampled	- Matrix	MRD Lab # Assigned	Tests Assigned	QA Test Results Page Number
001	0820-032294	22 Mar 94	Soil	940324-001 940324-002	Modified 8015 TRPH	C1 C16
002	308-032294	22 Mar 94	Soil	940324-003 940324-004	Modified 8015 TRPH	C2 C17
003	2908-032394	23 Mar 94	Soil		Modified 8015 TRPH	C3 C18
004	285B-032394	23 Mar 94	Soil	940324-060 940324-061	Modified 8015 TRPH	C4 C19
005	3220-032394	23 Mar 94	Soil	940324-062 940324-063	Modified 8015 TRPH	C5 C24
006	455D-032494	24 Mar 94	Soil	940325-002 940325-003	Modified 8015 TRPH	C6 C25
007	4300-032494	24 Mar 94	Soil	940325-004 940325-005	Modified 8015 TRPH	C7 C26
800	477E-032494	24 Mar 94	Soil		Modified 8015 TRPH	C8 C27
009	537B32894	24 Mar 94	Soil	940329-010 940329-011	Modified 8015 TRPH	C10 C29
010	588032894	28 Mar 94	Soil	940329-008 940329-009	Modified 8015 TRPH	C9 C28
011	569032894	28 Mar 94	Soil	940329-012 940329-013	Modified 8015 TRPH	C11 C30
012	532B32894	28 Mar 94	Soil	940329-014 940329-015	Modified 8015 TRPH	C12 C31

# CHAIN-OF-CUSTODY INFORMATION

PART B

 Page No.	Chain-of-Custody No.	Date Signed	<del></del>
Bl	417552	22 Mar 94	
B4	413605	23 Mar 94	
В7	413609	23 Mar 94	
B10	413612	24 Mar 94	
B13	375793	28 Mar 94	



# ANALYSIS R UEST AND CHAIN OF CUSTODY RECORD\*

Reference	Document	j.	1175°
age 1 of	1		7115

CORPORA							,	
Project Name/f	No. 'Fort Story 5	19029 Samp	oles Shipm	ent Date	7 3-	22-94 Bill t	0:5 Tom Mathison	IT Corp
Sample Team Memb	ers DeMarco Ber	naddo	Lab De	stination	8 MR	D lab	2790 Mosside Monroeville P	BIVA
Profit Center	No. 3 3511		Lab	Contact	9		-	
Project Mana	iger Tom Mathiso	n Proje	ect Contac	t/Phone	17. mat	hison (412) 372-7701 Report to	.10 Tom Mathiso	n
	No. 6 519029	(	Carrier/W	aybill No.	13 96 i	Report to	TI COIP	<b>A</b>
Required Report D	ate 11						2790 Mosside Monroeville PA	
·		Date/Time 16	*·			PER LINE	Monroeville PA	Disposal 22
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected	Туре	Volume	sorvative		Receipt	Record No.
082D-032294	Soil	9:00	anbur 91655	(3) (0) m	40	8015		
0820-032294	Soil	9:00	amber glass	250ml	ice	418.1		
30D-032294	جمنا	3-22-54 10:55	amber glass	(3)	iceyo	8015	,	
30D-032294	501	3-22-94	amber 91985	250ml	ice	418.1		
		<b></b>		ļ				<del> </del>
			<del> </del>	<u> </u>		1		
			<u> </u>	<u> </u>				
Special Instruction	ns: <sup>23</sup>	,						
Possible Hazard I		itant 🔟 Poi	ison B !_	Unknow	'n <b>_1</b>	Sample Disposal: <sup>25</sup> Return to Client' Disp	posal by Lab 🗹 🛚 Archiv	e (mos
Turnaroynd Time			Q(	C Level: 2		Project Specific (specify):		· · · · · · · · · · · · · · · · · · ·
1. Relinquished by		Dai Tim	te: 3/22/ ne: 4/20	94	T	eived by 28	Date: Time:	
2. Relinquished by (Signature / Affiliation)	of the second	Dai Tim	e:		2. Rece		Date:	· · · · · · · · · · · · · · · · · · ·
3. Relinquished by (Signatura / Attiliation)		Dat Tin	te:		3. Rece	eived by	Date:	23 Mar. 94
Comments: 29					1	GWAIN TO VO	( uve year)	(/05(/

LIMS# 2482 MRD Cooler # MA Number of Coolers Contractor Cooler
PROJECT: Fort Story LARC Date received: 23 Mar 94
USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.
A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 23 May 94 c-of-C Number: 417552
by (print) Contract. German (sign) Could Show
1. Did cooler come with a shipping slip (air bill, etc.)?
If YES, enter carrier name & air bill number here: FEDX: 9636951979
2. Were custody seals on outside of cooler?
How many & where: d-Ml ench Sile of Lid, seal date: None, seal name Mal
3. Were custody seals unbroken and intact at the date and time of arrival?
4. Did you screen samples for radioactivity using the Geiger Counter
5. Were custody papers sealed in a plastic bag & taped inside to the lid?
6. Were custody papers filled out properly (ink, signed, etc.)?
7. Did you sign custody papers in the appropriate place?
8. Was project identifiable from custody papers? If YES, enter project name at the top of this form. YES NO
9. If required, was enough ice used?
10. Have designated person initial here to acknowledge receipt of cooler:(date)
B. LOG-IN PHASE: Date samples were logged-in: 24 May 44
by (print) CANYA L GOYMAK (sign) MAN DAMAN
11. Describe type of packing in cooler:
12. Were all bottles sealed in separate plastic bags?
13. Did all bottles arrive unbroken & were labels in good condition?
14. Were all bottle labels complete (1D. date, time, signature, preservative, etc.)? YES NO
15. Did all bottle labels agree with custody papers?
16. Were correct containers used for the tests indicated?
17. Were correct preservatives added to samples?
18. Was a sufficient amount of sample sent for tests indicated?
19. Were bubbles absent in Volatile samples? If NO, list by QAF:
20. Was the project manager called and status discussed? If YES, give details on the back of this form. YES NO
On the control of the second o

9. Too little ice for so much sample b) Vermiculate is a good insulator-Needs More ice.

Note: Vernitualité was wet and wort butters were not sealed in a bag. Samples Received at 10°C.

14. No Time Sampled an Islah

15. For Sample ID ( 15 of Containers):

20D-039994 Jobels 30D-039994 30B-039994

Logged in as per label -



# **ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\***

Reference Document	4136	)
Page 1 of		

2790 Mosside Blod

Mathison

Monroeville Pa 15146

Project Name/No. 1 Fo	of Story
-----------------------	----------

519029 MRD LIMS 3482 Samples Shipment Date 7 3-23-94

Sample Team Members 2 Demarco Burnardo

Lab Destination 8 MRD

Profit Center No. 3 351

Lab Contact 9

Project Manager 4 Tom Mathison

Project Contact/Phone 12T. Mathison

Report to: 10 Tom Mathison IT Corp

Bill to:5 Jom

Purchase Order No. 6 519029

Carrier/Waybill No. 13 9710126215...

2790 massicle Blvd.

Required Report Date 11 NTAT Monroeville Pa 15146

Sample <sup>14</sup> Number	Sample 15 Description/Type	Date/Time 16 Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	p <sub>re-</sub> 19 servative	Requested Testing <sup>20</sup> Program	Condition on Receipt	21	Disposal <sup>22</sup> Record No.
		8:30	anber	(3)	ice ,	0016			
290B-032394	501	3-23-94	9955	Com	40	8015	ļ	·	
290 6-032394	soil	8:30' 3-23-94	amber glass	250m1	ice 40	4/8./	<u> </u>		
2855-032394	501	9:20	amber gless	(3) 60ML	ice 40	2015			
28513 7032394	soil	9:20 3-23:44	amber 91965	250ml	iu yo	418.1			
							;		
,					-				
		<del> </del>							
Special Instruction	ons: <sup>23</sup>			<b>*</b>	<u> </u>				
Possible Hazard	Identification: 24	ritant 🔟 Poi	son B 🔟	Unknow	٦	Sample Disposal: <sup>25</sup> Return to Client Disp	oosal by Lab 🔏	Archive	(mos.)
Turnaround Time	e Required: <sup>26</sup>		QC I	C Level: 2	7 III. <b>1</b>	Project Specific (specify):			
1. Relinquished by (Signature/Affiliation)	28 - Same	Dat Tim	ie: 3/23/9	74	1. Rece	ived by <sup>28</sup> Affiliation)		Date: Time:	
2. Relinquished by (Signature/Affiliation)		Dat Tim	e:		2. Rece		2	Date: Time:	
3. Relinquished by (Signature/Affiliation)	,	Dat Tim			3. Rece (Signature/	eived by Affiliation	V Voudu	Date: 34 Time:	Mar 44
Comments: 29	<del> </del>	<del></del>				the second	H-XXXX	<i>l</i>	(1.15

LIMS# 2482 MRD Cooler # NA Number of Coolers 142 Contractor Cooler IT
PROJECT: Fort Story Love Avea Date received: 24 Mar 94
USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.
A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 24 Mar 94 c-of-C Number: 4/3/005
by (print) Convad L. Garman (sign) Carnel & Blogs
1. Did cooler come with a shipping slip (air bill, etc.)?
If YES, enter carrier name & air bill number here: FEDX: 97/0126215
2. Were custody seals on outside of cooler? Custody Task
How many & where: & Me fifth Sell of Les , seal date: Mark , seal name Noul
3. Were custody seals unbroken and intact at the date and time of arrival? YES
4. Did you screen samples for radioactivity using the Geiger Counter
5. Were custody papers sealed in a plastic bag & taped inside to the lid?
6. Were custody papers filled out properly (ink, signed, etc.)?
7. Did you sign custody papers in the appropriate place?
8. Was project identifiable from custody papers? If YES, enter project name at the top of this form. YES NO
9. If required, was enough ice used? Type of ice: Agrafia //-/2°C YES NO
10. Have designated person initial here to acknowledge receipt of cooler:(date)_5/24/94
B. LOG-IN PHASE: Date samples were logged-in: 24 May 94
by (print) Con rad L. German (sign) Control Lesson
11. Describe type of packing in cooler: Dia timpagus Fastic - Muddy
12. Were all bottles sealed in separate plastic bags?
13. Did all bottles arrive unbroken & were labels in good condition?
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)?
16. Were correct containers used for the tests indicated?
17. Were correct preservatives added to samples?
18. Was a sufficient amount of sample sent for tests indicated?
19. Were bubbles absent in Volatile samples? If NO, list by QAJ:
20. Was the project manager called and status discussed? If YES, give details on the back of this form. YES NO
21. Who was called ? By whom ? (date)

- 3. One Custry Secol Campbelly broken those through on assiral at MRD hab.
- 6. Note: Time Religioshed should have an indication whether 4:30 is AM M PM.
- 9. Note enough ice all metter out of poly bag (diatorocous earth turned to Mad)

  Samples Received at 11-12°C.
- 14. No Time-Sampled entrees on bottle labels.

2	ERNATIONALCHNOLOGY
	CORPORATION

Comments: 29

# ANALYSIS K.JUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document	٠Ο.	4136
Page 1 of		

CORPORAT	TION	CHA	AIIN OF	rna in	DI HE	CURU" Pa	ge 1 01 <u>1                                </u>	
Project Name/I	No. HE. Story	1 5190295am	NRD L ples Shipn	」Mらる nent Date	402 3-	23-94 Bill	to:5 Tom Mothi	500
	ers DeMarco. / 1			estination		•	IT Caro	
Profit Center I		34 1111,50		b Contact	•		a790 mess monoeville	De 15/14/
Project Mana	iger Tom Mathis	SoA Proi	ect Contac	ct/Phone	-17. Ma	thison (112)372,7701 Report 1		
	No. 6 519029	,	Carrier / W	Vavbill No.	13 9-	1101262/5 Heport t	IT Corp	30N
Required Report D						PER LINE	2790 Mossic Monrowille Pa	L 15146
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected	Туре	<sup>17</sup> Sample <sup>18</sup> Voluma	Pre- 1: servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>2</sup> Record No.
3221.032394	501	10:30 5-23-94	Slass	(3) (0)	Ke yo	<i>સ</i> ગડ		
3320-032394	Soi	10:30 3-23-94	giss	250M	1040	418.1		
			0				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
					ļ			
		· · · · · · · · · · · · · · · · · · ·					<u> </u>	-
				<u> </u>				
Special Instructio	<del></del>					·	<del></del>	
Possible Hazard I Non-hazard		ritant 🗓 Po	ison B 🗓	Unknowi	ן בי	Sample Disposal: 25 Return to Client: Dis	posal by Lab 🕰 💢 Arch	nive (mo
Turnaround Time Normal Rush	Required: <sup>26</sup> <b>J</b>			C Level: 2	7 III. <sup>i</sup>	Project Specific (specify):		
1. Relinquished by (Signature/Alfiliation)	28 Jour Barne	Dat ノ Tim	te: 3/23/ ne: 4/:30	94	1. Rece	eived by 28	Dat Tim	
2. Relinquished by (Signature/Affiliation)		Dat Tim	te:		2. Rece	eived by (Affiliation)	Dat Tim	e:
3. Relinquished by (Signature/Altiliation)		Dat Tim				eived by	1-64	e:24 Nov 9

LIMS 2482 MRD Cooler MA Number of Coolers 2012 Contractor Cooler IT
PROJECT: Fort Story Lave Avea Date received: 24 Mar 94
USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.
A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 24 May 94 C-of-C Number: 413609
by (print) CON VAD L. GEVYMIN (sign) Currel Lessuren
1. Did cooler come with a shipping slip (air bill, etc.)?
If YES, enter carrier name & air bill number here: FEDX: 680112902
2. Were custody seals on outside of cooler? I.T. CHATO.S.Y. Tayso
How many & where: 2- No each Sile of Lid, seal date: Work, seal name Work
3. Were custody seals unbroken and intact at the date and time of arrival? YES NO
4. Did you screen samples for radioactivity using the Geiger Counter
5. Were custody papers sealed in a plastic bag & taped inside to the lid?
6. Were custody papers filled out properly (ink, signed, etc.)?
7. Did you sign custody papers in the appropriate place?
8. Was project identifiable from custody papers? If YES, enter project name at the top of this form. YES NO
9. If required, was enough ice used? Type of ice: Paylar D
10. Have designated person initial here to acknowledge receipt of cooler: $\sqrt{\Gamma(\text{date})} = \sqrt{24/94}$
B. LOG-IN PHASE: Date samples were logged-in: 24 May 44
by (print) Call La German (sign) Mul Jana
The state of the s
11. Describe type of packing in cooler: Diatamperus taren -All Wet-Mild.
12. Were all bottles sealed in separate plastic bags?
13. Did all bottles arrive unbroken & were labels in good condition?
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? YES NO
15. Did all bottle labels agree with custody papers?
16. Were correct containers used for the tests indicated?
17. Vere correct preservatives added to samples?
18. Was a sufficient amount of sample sent for tests indicated?
19. Were bubbles absent in Volatile samples? If NO, list by QAJ:
20. Was the project manager called and status discussed? If YES, give details on the back of this form. YES NO
21. Who was called ? By whom ? (date)

3. One custody take appeared to be old and und completely cut through - on arrival at MRD lab.

a) Not enough ice

b) I ce was not double bayyed

c) Packing (Distornacean Earth) was turned to Mud.

d) Received at 6°C.

6. Changed character es Not initialled.

14. No Time-Sampled entrees on battle balds.



# ANALYSIS R\_JUEST AND CHAIN OF CUSTODY RECORD\*

Reference	Document 10.	4136
Page 1 of	<u> 1</u>	

CORPORA	TION	0117	ACCEPTS.	316		JONES	90 . 0	
Project Name/	No. 4 orl > Hory - 51	רוס ארן Samp	() K, [) / ples Shipm	ent Date	7 3-5	24-લંબુ Bill	to:5 Tom Mallico	( <b>ì</b>
Sample Team Memb	pers 2. Di Marai   Bi	rnarde		stination			2790 Mossal	. Quel
	No. <sup>3</sup> عندا			Contact		• · · ·	- Monrosville Pa	15146
Project Mana	ager 4 Toin Mathis	Proje	ct Contac	t/Phone	12 1 11 W	Misch (412) 573 171	to: 10- lam plattic	50
Purchase Order	No. 6 519029	<u>.</u> <u>.</u> . C	Carrier/W	aybill No.	13 1451	223675	III Lorr	•
Required Report C	Date "normal_TH					PER LINE	_2790 mezzacii nonounili Jos	らいさ - <i>下は</i> ル
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time 16 Collected		Sample 18				Disposal 22 Record No.
450- (35/94	Description/Type	9:21 3-24-04	LL WILLY	(3)	1(1 1/0	2015	насарт	Record No.
नेरुट्रेष्ठ व्यञ्जेष	Sul	3-24-94	(they	3.00	16	416.1		
430 C. 032494	ابنذ	9:35 3:24-94 9:36	uneur Chron	13) 10:ml	1(4 1/4	1154 805		
4500-939494	اند	13-21-94	ifics.	1. 1. m	16	4181		
4776-133494	501	7-24-94	ameur	(s)	ict 4°	E013	4.1 da.	
177E (333494	50,1	10.50 3.24.94	unieur Ste 35	اسرجونا	ſά 4 ε	418.		
Special Instruction					·-·	0 . 5 . 26		<del></del>
Possible Hazard Non-hazard 🔌 🕒 F		itant 🔟 Pois	son B 🛄	Unknow	n _1	Sample Disposal: <sup>25</sup> Return to Client! Dis	sposal by Lab 🔏 💮 Archive	(mos
Turnaround Time Normal d Rush			Q(	C Level: 2		Project Specific (specify)		
1. Relinquished by (Signature/Affiliation)			e: 7/24 e: 4/3	194	1. Rece (Signature/	eived by 28 Affiliation)	Date: Time:	
2. Relinquished by (Signature/Affiliation)		Dat Tim	e:		2. Rece (Signature/		Date: Time:	
3. Relinquished by (Signature/Affiliation)	/	Dat Tim			3. Rece		Date: Time:	
Comments: 29								

LIMS 2482 MRD Cooler / MA Number of Coolers Contractor Cooler
PROJECT: Fost Story Lave Avea Date received: 25 Mar. 924
USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.
A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 25 Mgs. 927 c-of-C Number: 4/36/2
by (print) CANVAS L. GRYMAN (sign) CASSE LOWAR
1. Did cooler come with a shipping slip (air bill, etc.)?
If YES, enter carrier name & air bill number here: FEDX: 1451223675
2. Were custody seals on outside of cooler? IT Custody Tapl. YES NO
How many & where: 2- Me anh Sill Ald; seal date: Mal, seal name Mal
3. Were custody seals unbroken and intact at the date and time of arrival?
4. Did you screen samples for radioactivity using the Geiger Counter
5. Were custody papers sealed in a plastic bag & taped inside to the lid?
6. Were custody papers filled out properly (ink, signed, etc.)?
7. Did you sign custody papers in the appropriate place?
8. Was project identifiable from custody papers? If YES, enter project name at the top, of this form. YES NO
9. If required, was enough ice used? Type of ice: Regular - all Metro. 5-10°C YES (NO
10. Have designated person initial here to acknowledge receipt of cooler: $1000000000000000000000000000000000000$
B. LOG-IN PHASE: Date samples were logged-in: 25 Mar 94
by (print) Ohma L. Grer Millsign) Canad Deliver
11. Describe type of packing in cooler: White Courted from Distribusions Farth
12. Were all bottles sealed in separate plastic bags?
13. Did all bottles arrive unbroken & were labels in good condition?
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? YES (NO
15. Did all bottle labels agree with custody papers?
16. Were correct containers used for the tests indicated?
17. Were correct preservatives added to samples?
18. Was a sufficient amount of sample sent for tests indicated?
19. Were bubbles absent in Volatile samples? If NO, list by QAF:
20. Was the project manager called and status discussed? If YES, give details on the back of this form. YES NO
21. Who was called ? By whom ? (date)

9. Saught on Top-Warm Not enough ice on tips
of Scarples Saughs below-waited
away from ice

6. Changed item is Not installed

14. No Time-Sampled entries on bottles.

	I RNATIONAL  1. ANOLOGY
<b>∑</b> C <b>I</b>	CORPORATION

# ANALYSIS RE JEST AND CHAIN OF CUSTODY RECORD\*

Reference Do	cument 🧢	3757	9
Page 1 of	_		

CORPORA	IION	Ona	· A A C C			y Edding	de i oi TT	
Project Name/	No. 1 Ft . Story_5	19029 Sampl	MK() les Shipm	レかり ent Date	7 040	フン Bill I	to:5 Ton Mathison	_
Sample Team Memb	ers 2 De Marco/Be	rrand o			8 MRD		III Corp	***
Profit Center	No. 3 3511		Lab	Contact	9		_ 2790 Mossid	0 151111
Project Mana	ager Tom Math	isoo Proie	ct Contac	t/Phone	147. M	athison (12) 372.72	2010-10-10-14	~ 13/70
Purchase Order	No. 6 519029	C	arrier /W	avhill No	130/6	16951865.	o: 10 M Mathix	2
	Date 11 Normal TI	A9					. 2790 Mossid	e Blud
	<del>,</del>					PER LINE	Monroeville Pa	_ 15146
Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Collected	Container <sup>17</sup> Type	/Sample <sup>18</sup> Volume	Pre- 19 servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
784D32894	Soil.	3/24/94	lmber	(3) (d)ml	ia yo	8015		
555 032814		8H" 3/28/99	7	250ml		418.1		
577B 32894		3/24/44		(3)		8015	New York	
43713 32844		10:40		250ml		419.1		
569072894		11:7-		(3) 100ml		8015		
5641) 32944		3/24/64		250m		418.1	1	
53213-32894		12:26		(3) (DM)		8015	107	
	50il	7/28/97	sher	2501	1Ce 40	419.1		
Special Instruction			7	<del> </del>	L	<del>L. 11. L. L. L. L. L. L. L. L. L. L. L. L. L.</del>	I	
Possible Hazard   Non-hazard (X)   FI		itant   Poise	on B I_1	Unknown		Sample Disposal: 25 Return to Client Disp	osal by Lab 街 🛚 Archive	
Turnaround Time	Required: 26			Level: 27			Osar by Cab (Z) Archive	(mos.)
1. Relinquished by [Signature/Affiliation]	<del></del>	Date	: 3/28/			Project Specific (specify): ived by <sup>28</sup>	Date:	-
2. Relinquished by [Signature/Affiliation]		Date Time	:		2. Recei	ived by	Time:	
3. Relinquished by (Signature/Altiliation)		Date Time	· _		3 Recei	· · · · · · · · · · · · · · · · · · ·	Time: Date:	3/29/99
Comments: 29						yacif St.	ULIK Time:	0830

# COOLER RECEIPT FORM

LIMS 1 2482 HRD Cooler 1 Humber of Coolers Contractor Cooler
PROJECT: 4t. Story Date received: 3/29/94
USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.
A. PRELIHINARY EXAMINATION PHASE: Date cooler opened: 329194 c-of-C Number: 375793
by (print) Shelly Swink (sign) Shelly Swink
1. Did cooler come with a shipping slip (air bill, etc.)?
If YES, enter carrier name & air bill number here: FEDX: 9626951865
2. Were custody seems on outside of cooler?
How many & where: <u>lach didl</u> , seal date: <u>MONC</u> , seal name
3. Were custody seals unbroken and intact at the date and time of arrival?
4. Did you screen samples for radioactivity using the Geiger Counter
5. Were custody papers sealed in a plastic bag & taped inside to the lid?
6. Were custody papers filled out properly (ink, signed, etc.)?
7. Did you sign custody papers in the appropriate place?
8. Was project identifiable from custody papers? If YES, enter project name at the top of this forms. YES NO
9. If required, was enough ice used? Type of ice: required 4-9.5 YES NO
10. Have designated person initial here to acknowledge receipt of cooler: $\frac{P}{(date)}\frac{3/29/99}{}$
$\cdot$ $\cdot$ $\cdot$ $\cdot$ $\cdot$ $\cdot$ $\cdot$ $\cdot$ $\cdot$ $\cdot$
B. LOG-IN PHASE: Date samples were logged-in: 3/29/9/
by (print) Shelly Swink (sign) Shelly Swink
11. Describe type of packing in cooler: Crushed rock
12. Vere all bottles sealed in separate plastic bags?
13. Did all bottles arrive unbroken & were labels in good condition?
14. Vere all bottle labels complete (ID, date, time, signature, preservative, etc.)?
15. Did all bottle labels agree with custody papers?
16. Vere correct containers used for the tests indicated?
17. Were correct preservatives added to samples?
18. Was a sufficient amount of sample sent for tests indicated?
19. Were bubbles absent in Volatile samples? If NO, list by QAF:
20. Was the project manager called and status discussed? If YES, give details on the back of this form. YES NO

# QUALITY ASSURANCE TEST RESULTS

## Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 22 Mar 94

Customer Sample No: 082D-032294

Date Sample Received: 23 Mar 94

MRD Lab Sample No: 940324-H001

Date Extracted: 08 Apr 94

Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar

Analyst: M. Woster

### RESULTS

Analysis for (mg/kg) Detection
Limits (mg/kg)

TPH, C6-C24 (as diesel)

u

10

Pentacosane Surrogate Recovery: 100%

Lab Comment: The sample contains no detectable gasoline or diesel

hydrocarbons, but appears to contain about 500 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichel Date: 15 April 94

# Total Fuel Hydrocarbons

PAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 22 Mar 94

Customer Sample No: 30B-032294
MRD Lab Sample No: 940324-H003

Date Sample Received: 23 Mar 94

Date Extracted: 08 Apr 94 Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar

Analyst: M. Woster

### RESULTS

Analysis for (mg/kg) Detection
Limits (mg/kg)

TPH, C6-C24 (as diesel) u 10

Pentacosane Surrogate Recovery: 104%

Lab Comment: The sample contains no detectable gasoline or diesel

hydrocarbons, but appears to contain about 200 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

Approved By: David & Splithal Date: 15 April 94

# Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 23 Mar 94 Customer Sample No: 290B-032394
Date Sample Received: 24 Mar 94 MRD Lab Sample No: 940324-H058

Date Extracted: 08 Apr 94
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

#### RESULTS

Analysis for	Result (mg/kg)	Detection Limits (mg/kg)	
TPH, C6-C24 (as diesel)	u	10	

Pentacosane Surrogate Recovery: 99%

Lab Comment: The sample contains no detectable gasoline or diesel

hydrocarbons, but appears to contain about 200 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichal Date: 15 April 94

# Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 23 Mar 94 Customer Sample No: 285B-032394
Date Sample Received: 24 Mar 94 MRD Lab Sample No: 940324-H060

Date Extracted: 08 Apr 94
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

### RESULTS

	Result	Detection
Analysis for	(mg/kg)	Limits (mg/kg)
TPH, C6-C24 (as diesel)	u .	10

Pentacosane Surrogate Recovery: 108%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 200 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichel Date: 15 April 94

# Total Fuel Hydrocarbons

PAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 23 Mar 94 Customer Sample No: 322D-032394
Date Sample Received: 24 Mar 94 MRD Lab Sample No: 940324-H062

Date Extracted: 08 Apr 94
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

### RESULTS

Analysis for	Result (mg/kg)	Detection Limits (mg/kg)
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: Matrix Interference

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 2500 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Sphihal Date: 15 April 94

## Total Puel Hydrocarbons

**FAMIS No: 2482** 

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 24 Mar 94 Customer Sample No: 455D-032494
Date Sample Received: 25 Mar 94 MRD Lab Sample No: 940325-H002

Date Extracted: 08 Apr 94 Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

### RESULTS

Analysis for	Result (mg/kg)	Detection Limits (mg/kg)
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 121%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 2000 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Sphilled Date: 15 April 94

#### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 24 Mar 94 Customer Sample No: 430C-032494
Date Sample Received: 25 Mar 94 MRD Lab Sample No: 940325-H004

Date Extracted: 08 Apr 94
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

#### RESULTS

	Result	Detection			
Analysis for	(mg/kg)	Limits (mg/kg)			
TPH, C6-C24 (as diesel)	u	10			

Pentacosane Surrogate Recovery: 102%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 500 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 24 Mar 94 Customer Sample No: 477E-032494
Date Sample Received: 25 Mar 94 MRD Lab Sample No: 940325-H006

Date Extracted: 08 Apr 94
Date Analysed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

#### RESULTS

Analysis for (mg/kg) Detection
Limits (mg/kg)

TPH, C6-C24 (as diesel)

u

10

Pentacosane Surrogate Recovery: 127%

Lab Comment: The sample contains no detectable gasoline or diesel

hydrocarbons, but appears to contain about 1500 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 28 Mar 94 Customer Sample No: 588D032894
Date Sample Received: 29 Mar 94 MRD Lab Sample No: 940329-H008

Date Extracted: 08 Apr 94
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

#### RESULTS

	Result	Detection			
Analysis for	(mg/kg)	Limits (mg/kg)			
TPH, C6-C24 (as diesel)	u ·	10			

Pentacosane Surrogate Recovery: 108%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 400 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 28 Mar 94 Customer Sample No: 537B032894
Date Sample Received: 29 Mar 94 MRD Lab Sample No: 940329-H010

Date Extracted: 08 Apr 94
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

RESULTS

Result Detection
Analysis for (mg/kg) Limits (mg/kg)

TPH, C6-C24 (as diesel) u 10

Pentacosane Surrogate Recovery: 113%

Lab Comment: The sample contains no detectable gasoline or diesel

hydrocarbons, but appears to contain about 200 mg/kg

of a lubricating-type oil.

u: Below Detection Limit

### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 28 Mar 94 Customer Sample No: 569D032894
Date Sample Received: 29 Mar 94 MRD Lab Sample No: 940329-H012

Date Extracted: 08 Apr 94
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

#### RESULTS

Analysis for	Result (mg/kg)	Detection Limits (mg/kg)
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 105%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, and no detectable lubricating-type oils

(less than 100 mg/kg).

u: Below Detection Limit

Approved By: Navid E. Sphilled Date: 15 April 94

### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 28 Mar 94 Customer Sample No: 532B032894
Date Sample Received: 29 Mar 94 MRD Lab Sample No: 940329-H014

Date Extracted: 08 Apr 94
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

#### RESULTS

Analysis for (mg/kg) Detection
Limits (mg/kg)

TPH, C6-C24 (as diesel)

u

10

Pentacosane Surrogate Recovery: 109%

Lab Comment: The sample contains no detectable gasoline or diesel

hydrocarbons, and no detectable lubricating-type oils

(less than 100 mg/kg).

u: Below Detection Limit

### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

QC Sample Identifier: Method Blank

Date Sample Taken: NA

Customer Sample No: NA

Date Sample Received: NA

MRD Lab Sample No: 940408MB

Date Extracted: 08 Apr 94 Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Sodium Sulfate

Sample Container Used: 20 mL vial

Analyst: M. Woster

#### RESULTS

Analysis Sample Detection for Result(mg/kg) Limits (mg/kg) 10 u

TPH, C6-C24

Pentacosane Surrogate Recovery: 988

u: Below Detection Limit

### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

OC sample Identifier: Laboratory Duplicate

Date Sample Taken: 22 Mar 94 Date Sample Received: 23 Mar 94 Customer Sample No: 082D-032294-005

MRD Lab Sample No: 940324-H001

Date Extracted: 08 Apr 94 Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

### RESULTS

Analysis for	Sample Result I	Sample Result 2	Detection Limits (mg/kg)			
<del></del>						
TPH, C6-C24	u	u	10			
Pentacosane Su	ırrogate					
Recovery (%)	100	126				

Surrogate Average = 113%

RPD = 23.0

COMMENT: There is some interference due to the presence of about 500 mg/kg of lubricating-type oil in the samples.

u: Below Detection Limit

### Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

QC Sample Identifier: Matrix Spike/Matrix Spike Duplicate

Date Sample Taken: 22 Mar 94 Customer Sample No: 082D-032294-005

Date Sample Received: 23 Mar 94 MRD Lab Sample No: 940324-H001

Date Extracted: 08 Apr 94 Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar Analyst: M. Woster

			· — - <del>-</del>			
Analysis for	Sample Result	Spiked Level	Result (mg/kg)	% Rec.	Surrogate Rec. Pentacosane	
TPH, C6-C2	4 u	200	264	132	123	
TPH, C6-C2	4 u	200	238	119	109	

RESULTS

Average Recovery = 251 mg/kg (126%) RPD = 10.4

COMMENT: There is some interference due to the presence of about 500 mg/kg of lubricating-type oil in the sample.

DL: 10 mg/kg as diesel u: Below Detection Limit

David E. Spliebal Date: 15 April 94

# Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940324-H002 Client Sample No.: 082D-032294

Extraction Method: EPA-9071 Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Taken: 22 Mar 94

Date Sample Received: 23 Mar 94

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94 Percent Solid (%): 99.9

Extraction Solvent: Freon TF

Dilution Factor: 1.0

## RESULTS (mg/kg)

Analysis	Result	Detection Limit		
Petroleum Hydrocarbons	360	25		

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.13 Final extracted volume (mL): 100

Approved By:

curs

### Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940324-H004

Client Sample No.: 30B-032294

Extraction Method: EPA-9071

Analysis Method: EPA-418.1 Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Taken: 22 Mar 94

Date Sample Received: 23 Mar 94

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94 Percent Solid (%): 99.5

Extraction Solvent: Freon TF

Dilution Factor: 1.0

### RESULTS (mg/kg)

Analysis		Result	Detection Limit		
Petroleum	Hydrocarbons	130	25		

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.49 Final extracted volume (mL): 100

curo

### Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940324-H059

Client Sample No.: 290B-032394

Extraction Method: EPA-9071

Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

RESULTS (mg/kg)

Analysis	Result	Limit		
Petroleum Hydrocarbons	240	25		

Laboratory Comments:

GREY BROWN

Extracted sample weight (g): 20.17 Final extracted volume (mL): 100

Approved By:

curs

Date Sample Taken: 23 Mar 94

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

Date Sample Received: 24 Mar 94

Percent Solid (%): 96.8 Extraction Solvent: Freon TF

Dilution Factor: 1.0

### Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940324-H061 Client Sample No.: 285B-032394

Extraction Method: EPA-9071
Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK Analyzed By: CHARLES W. BLACK

Date Sample Taken: 23 Mar 94

Date Sample Received: 24 Mar 94
Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

Percent Solid (%): 97.4
Extraction Solvent: Freon TF

Dilution Factor: 1.0

## RESULTS (mg/kg)

Analysis	Result	Detection Limit		
Petroleum Hydrocarbons	100	25		

Laboratory Comments:

GREY SAND

Extracted sample weight (g): 20.03
Final extracted volume (mL): 100

Approved By:

Schrother

FAMIS Number: 2482

Project Name: Fort Story Larc Area

QC Identifier: Method Blank

Sample Description: Soil Analysis Procedure: EPA-418.1

Extraction Method: SW-846 Method 9071

Analyst: Charles W. Black

Comment: Clean Sand

Analysis

Blank Result

Detection

Limit

TRPH

25

Units

mg/kg

mg/kg

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

TRPH = Total Recoverable Petroleum Hydrocarbons

u = Below Detection Limits

Approved By: Stylon Selection

FAMIS Number: 2482

Project Name: Fort Story Larc Area

QC Identifier: Blank Spike/Blank Spike Duplicate

Sample Description: Soil

Analysis Procedure: EPA-418.1

Comment: Clean Sand

Extraction Method: SW-846 Method 9071

Analyst: Charles W. Black

Anal	Blank Res	Spike Added	Conc BS	Rec BS	Blank Res	Spike Added	Conc BSD=	Rec BSD	RPD	QC Limits RPD %Rec
TRPH	u	1005	946	94	u	1005	928	92	2	25 75-125
Units	mg/kg	mg/kg	mg/kg	*	mg/kg	mg/kg	mg/k	g %	*	*

Date Extracted: 31 Mar 94 Date Analyzed: 06 Apr 94

Date Extracted: 31 Mar 94 Date Analyzed: 06 Apr 94

Extraction Solvent: Freon TF Final Extracted Volume: 100 mL

Anal = Analysis

TRPH = Total Recoverable Petroleum Hydrocarbons

Res = Result
Rec = Recovery

BS = Blank Spike

BSD = Blank Spike Duplicate

RPD = Relative Percent Difference

 $RPD = [(BS - BSD) \times 100] / [(BS + BSD) / 2]$ 

u = Below Detection Limit

Approved By: State Schucke

FAMIS Number: 2482

Project Name: Fort Story Larc Area QC Identifier: Matrix/Matrix Duplicate

Date Sample Taken: 22 Mar 94

Customer Sample No: 082D-032294

Date Sample Recieved: 23 Mar 94

Lab Sample No: 940324-H002

Sample Description: Soil

Extraction Method: SW-846 Method 9071

Sample Container Used: 1-250 amber glass Analysis Method: EPA-418.1

Comment: Grey Sand

Analyst: Charles W. Black

Analysis	Sample Run # 1	Results Run # 2	RPD	Acceptable RPD	Detection Limit
TRPH	356	316	12	25	25
Units	mg/kg	mg/kg	४	*	mg/kg

Pate Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

TRPH = Total Recoverable Petroleum Hydrocarbons

RPD = Relative Percent Difference

 $RPD = [Run 1 - Run 2] \times 100 / [(Run 1 + Run 2) / 2]$ 

u = Below Detection Limits

NC = Not Calculable

Approved By: State State

VB

FAMIS Number: 2482

Project Name: Fort Story Larc Area

QC Identifier: Matrix Spike/Matrix Spike Duplicate

Date Sample Taken: 22 Mar 94 Customer Sample No: 082D-032294 Date Sample Recieved: 23 Mar 94 Lab Sample No: 940324-H002

Sample Description: Soil Extraction Method: SW-846 Method 9071

Analysis Method: EPA-418.1 Comment: Grey Sand

Sample Container Used: 1-250 ml amber glass Analyst: Charles W. Black

Anal	Samp Res I	Spike Added	Conc MS	Rec MS	Spike Added	Conc MSD=		RPD		Limits %Rec
TRPH	356	495	784	87	500	817	92	6	25	75-125
Units	mg/kg	mg/kg	mg/kg	*	mg/kg	mg/k	g <b>%</b>	*		*

Date Extracted: 31 Mar 94 Date Analyzed: 06 Apr 94

Date Extracted: 31 Mar 94 Date Analyzed: 06 Apr 94

Extraction Solvent: Freon TF Final Extracted Volume: 100 mL

Anal = Analysis

TRPH = Total Recoverable Petroleum Hydrocarbons

Samp = SampleRes = Result Rec = Recovery

u = Below Detection Limits

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

 $RPD = [(MS - MSD) \times 100] / [(MS + MSD) / 2]$ 

Approved By: State Schuster

## Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940324-H063

Client Sample No.: 322D-032394

Extraction Method: EPA-9071 Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

## RESULTS (mg/kg)

Analysis	Result	Detection Limit	
Petroleum Hydrocarbons	6600	25	

Laboratory Comments:

DARK GREY SAND

Extracted sample weight (g ): 20.13 Final extracted volume (mL): 100

Approved By:

cwB

David E. Splichel

Date: 20 May 94

Date Sample Taken: 23 Mar 94

Date Extracted: 13 Apr 94

Date Analyzed: 19 Apr 94

Date Sample Received: 24 Mar 94

Extraction Solvent: Freon TF

Percent Solid (%): 93.8

Dilution Factor: 10

### Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940325-H003

Client Sample No.: 455D-032494

Extraction Method: EPA-9071

Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Taken: 24 Mar 94

Date Sample Received: 25 Mar 94

Date Extracted: 13 Apr 94
Date Analyzed: 19 Apr 94

Percent Solid (%): 89.4 Extraction Solvent: Freon TF

Dilution Factor: 1.0

### RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	1200	25

Laboratory Comments:

BROWN AND DARK GREY SAND

Extracted sample weight (g ): 20.54 Final extracted volume (mL): 100

David E. Splichel

### Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940325-H005

Client Sample No.: 430C-032494

Extraction Method: EPA-9071
Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

#### \_\_\_\_\_

RESULTS (mg/kg)

Analysis	Result	Detection Limit	
Petroleum Hydrocarbons	1800	25	

Laboratory Comments:

GREY BROWN SAND

Extracted sample weight (g ): 20.03 Final extracted volume (mL): 100

Approved By:

cwB

Dand E. Splichal

\_\_\_\_\_ Date: 20 May 94

Date Sample Taken: 24 Mar 94

Date Extracted: 13 Apr 94

Date Analyzed: 19 Apr 94

Date Sample Received: 25 Mar 94

Extraction Solvent: Freon TF

Dilution Factor: 1.0

Percent Solid (%): 87.5

### Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940325-H007

Client Sample No.: 477E-032494

Extraction Method: EPA-9071

Analysis Method: EPA-418.1 Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Received: 25 Mar 94 Date Extracted: 13 Apr 94

Date Sample Taken: 24 Mar 94

Date Analyzed: 19 Apr 94

Percent Solid (%): 90.5 Extraction Solvent: Freon TF

Dilution Factor: 1.0

## RESULTS (mg/kg)

Analysis	Result	Detection Limit	
Petroleum Hydrocarbons	440	25	

Laboratory Comments:

DARK GREY SAND

Extracted sample weight (g ): 20.18 Final extracted volume (mL): 100

Approved By:

curs

David E. Sphillel

## Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940329-H009

Client Sample No.: 588D32894

Extraction Method: EPA-9071

Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK Analyzed By: CHARLES W. BLACK Date Sample Taken: 28 Mar 94

Date Sample Received: 29 Mar 94

Date Extracted: 13 Apr 94

Date Analyzed: 19 Apr 94 Percent Solid (%): 92.2

Extraction Solvent: Freon TF

Dilution Factor: 1.0

### RESULTS (mg/kg)

Analysis	Result	Detection Limit	
Petroleum Hydrocarbons	520	25	

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.61 Final extracted volume (mL): 100

David E. Splichal

### Total Recoverable Petroleum\_Hydrocarbons \_\_

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940329-H011

Client Sample No.: 537B32894

Extraction Method: EPA-9071

Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

# Date Extracted: 13 Apr 94

Date Sample Taken: 24 Mar 94

Date Analyzed: 19 Apr 94

Percent Solid (%): 96.4

Date Sample Received: 29 Mar 94

Extraction Solvent: Freon TF

Dilution Factor: 1.0

### RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	47	25

Laboratory Comments:

BEIGE SAND

Extracted sample weight (g ): 20.46 Final extracted volume (mL): 100

Approved By:

Jan D. E. Splichal

Date: <u>20 May 94</u>

#### Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940329-H013

Client Sample No.: 569D32894

Extraction Method: EPA-9071 Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Taken: 28 Mar 94

Date Sample Received: 29 Mar 94 Date Extracted: 13 Apr 94

Date Analyzed: 19 Apr 94

Percent Solid (%): 86.3 Extraction Solvent: Freon TF

Dilution Factor: 1.0

### RESULTS (mg/kg)

Analysis	Result	Detection Limit	
Petroleum Hydrocarbons	350	25	

Laboratory Comments:

DARK GREY SAND

Extracted sample weight (g ): 20.00 Final extracted volume (mL): 100

Approved By:

David E. Splichel

### Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940329-H015

Client Sample No.: 532B32894

Extraction Method: EPA-9071

Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Taken: 28 Mar 94

Date Sample Received: 29 Mar 94

Date Extracted: 13 Apr 94

Date Analyzed: 19 Apr 94
Percent Solid (%): 94.9

Extraction Solvent: Freon TF

Dilution Factor: 1.0

### RESULTS (mg/kg)

Analysis	Result	Detection Limit	
Petroleum Hydrocarbons	270	25	

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.06 Final extracted volume (mL): 100

Approved By:

David E. Splichal Date: 20 May 94

FAMIS Number: 2482

Project Name: Fort Story-Larc Area

QC Identifier: Method Blank

Sample Description: Soil

Analysis Procedure: EPA-418.1

Comment: Clean Sand

Extraction Method: SW-846 Method 9071

Analyst: Charles W. Black

Analysis

Blank Result

Detection

Limit

TRPH

u

25

Units

mg/kg

mg/kg

Date Extracted: 13 Apr 94

Date Analyzed: 19 Apr 94

TRPH = Total Recoverable Petroleum Hydrocarbons

u = Below Detection Limits

CWB

Approved By: David Englished Date: 20 May 94

FAMIS Number: 2482

Project Name: Fort Story Larc Area

oc Identifier: Matrix/Matrix Duplicate

Date Sample Taken: 28 Mar 94

Customer Sample No: 532B32894 Lab Sample No: 940329-H015

Date Sample Recieved: 29 Mar 94

Extraction Method: SW-846 Method 9071

Sample Description: Soil Sample Container Used: 1-250 amber glass Analysis Method: EPA-418.1

Comment: Grey Sand

Analyst: Charles W. Black

Analysis	Sample Run # 1	Results Run # 2	RPD	Acceptable RPD	Detection Limit
TRPH	273	312	13	25	25
Units	mg/kg	mg/kg	१	*	mg/kg

Date Analyzed: 19 Apr 94 Date Extracted: 13 Apr 94

TRPH = Total Recoverable Petroleum Hydrocarbons

RPD = Relative Percent Difference

 $RPD = [Run 1 - Run 2] \times 100 / [(Run 1 + Run 2) / 2]$ 

u = Below Detection Limits

NC = Not Calculable

Approved By: Dard E, Splichal

FAMIS Number: 2482

Project Name: Fort-Story Larc Area -- -- --

QC Identifier: Matrix Spike/Matrix Spike Duplicate

Date Sample Taken: 28 Mar 94 Customer Sample No: 532B32894 Date Sample Recieved: 29 Mar 94 Sample Description: Soil Lab Sample No: 940329-H015

Extraction Method: SW-846 Method 9071

Comment: Grey Sand Analysis Method: EPA-418.1

sample Container Used: 1-250 ml amber glass Analyst: Charles W. Black

Anal	Samp Res I	Spike Added	Conc Ms	Rec MS	Spike Added		Rec MSD	RPD	QC Limit	
TRPH	273	528	894	118	514	880	118	0	25 75-12	- <b>-</b> ?5
Units	mg/kg	mg/kg	mg/kg	*	mg/kg	mg/k	g %	*	*	

+ Date Extracted: 13 Apr 94 Date Analyzed: 19 Apr 94

= Date Extracted: 13 Apr 94 Date Analyzed: 19 Apr 94

Extraction Solvent: Freon TF Final Extracted Volume: 100 mL

Anal = Analysis

TRPH = Total Recoverable Petroleum Hydrocarbons

Samp = SampleRes = Result Rec = Recovery

u = Below Detection Limits

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

 $RPD = [(MS - MSD) \times 100] / [(MS + MSD) / 2]$ 

Approved By: Dan DE. Sphillel

FAMIS Number: 2482

Project Name: Fort Story Larc Area

QC Identifier: Blank Spike/Blank Spike Duplicate

Sample Description: Soil

Analysis Procedure: EPA-418.1

Extraction Method: SW-846 Method 9071

Analyst: Charles W. Black

Comment: Clean Sand

Anal	Blank Res	Spike Added	Conc BS	Rec BS	Blank Res	Spike Added	Conc BSD=	Rec BSD	RPD	QC Limi RPD %R
TRPH	u	1004	1249	124	u	1004	1245	124	0	25 75-125
Units	mg/kg	mg/kg	mg/kg	*	mg/kg	mg/kg	mg/k	g %	ફ	*

Date Analyzed: 19 Apr 94 Date Extracted: 13 Apr 94

= Date Extracted: 13 Apr 94 Date Analyzed: 19 Apr 94

Extraction Solvent: Freon TF Final Extracted Volume: 100 mL

Anal = Analysis

TRPH = Total Recoverable Petroleum Hydrocarbons

Res = Result Rec = Recovery

BS = Blank Spike

BSD = Blank Spike Duplicate

RPD = Relative Percent Difference

 $RPD = [(BS - BSD) \times 100] / [(BS + BSD) / 2]$ 

u = Below Detection Limit

Jan 28. Splichel Date: 20 Mry 94